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The Child-Study Society.

The object of the Society is the Scientific Study of the Mental and Physical Condition of Children, and also of Educational Methods, with a view to gaining greater insight into Child-nature and securing more sympathetic and scientific methods of training the young.

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Child-Study.

The Journal of the Child-Study Society.

A SERIES OF EXPERIMENTS UPON ÆSTHETIC APPRECIATION IN CHILDREN.*

By HENRY J. WATT,

Lecturer on Psychology in the University of Glasgow.

1. One of the great leaders of modern experimental psychology was also the founder of the science of experimental æsthetics. The science that Fechner created attempts to analyse the processes that are present when any object is liked for its own sake, apart from any utilitarian, educational, or other extraneous motive. It has to determine what kinds of objects give this direct enjoyment, and to trace the relation between the latter and each element of the former which can be experimentally distinguished. Some part of the total pleasure may be produced by the sensory impressions given by the artistic object, and some part may be given by the arrangement of its elements, or by the series of mental processes which are evoked by these. If we remember the variety of mental states which may be excited by a complex sensory impression, we see at once that there is no mental state which may not at some time enter into and contribute to the total æsthetic enjoyment attaching to a work of art. It is, of course, problematic how far any given mental state can enter into æsthetic enjoyment without being changed in character, and what it is that then converts it into a state capable for the time of adding to or hindering æsthetic pleasure. There is certainly an æsthetic attitude which makes such differences; it is probably responsible for the clear line of demarcation between æsthetic

* An account of these experiments was given in 1907 to the Child-Study Society of Liverpool, and in 1909 to the Child-Study Society of Dundee and Edinburgh. The paper, now published at the request of the editor, follows closely the lines of the lectures.

value and extraneous value already suggested. The study of it is one of the main concerns of our science.

It will be readily understood how wide a field is allotted to such a science, and how varied is the work of exploration in view. The settlement was made only quite recently, and the promise of the land is largely in the future. Before the year 1900 only a few investigations had been made, but now there are many workers of many nationalities.

As a principle of work, it has been maintained that experimental investigation with the simplest conceivable objects must fix the lines upon which an explanation must be sought for even the most complex æsthetic enjoyment. From this starting-point, however remote it may seem, it is not so hard to come into close contact with the fullest and most unaffected æsthetic attitude of actual life.* A contribution to this principle will, it is hoped, be found in the present paper. To make its origin and position clear, accordingly, the main methods of simple experimental investigation must be named and explained.

2. The experimental methods of æsthetics fall into two main groups, those of impression and those of expression (Wundt). In the former, careful note is made introspectively of the feelings which are evoked by and in reference to certain precise objects or precisely varied series of objects. If doubt is attached to the classification of feelings as such, the record may limit itself to the judgments of approval or preference, which, in most cases, are readily obtained. The simplest of these is (1) the method of choice, simple or varied, in which, of a number or definite series of objects, that one is indicated which is liked best. More variety is obtained if judgments of greatest dislike or of indifference are also collected. The method is most fruitful if a large number of observers are available, for the results may then, in virtue of the variation of psychological equipment, predisposition, attention, and chance variation, approximate to those obtained by very much more detailed examination of a few observers. There is a close relation between popularity and excellence of art, in their widest sense, or highest preference. The method, taken simply, is, of course, the equivalent of the broad, unreflective choice of everyday life.

It is worth while to distinguish (2) the serial method, in which a series of objects, varied continuously on some objective basis, is converted by selective preferences into a series of decreasing æsthetic values. Such a series can be formed by placing the horizontal of a cross on a series of equal uprights, so that one is always one millimetre

* Cp. Külpe's report on the present position of experimental æsthetics, "Bericht über d. II. Kongress f. Exp. Psych., 1907," p. 1 ff., and "Segal, Archiv für die Ges. Psych.," vii. s. 86.

lower than the preceding. This form of investigation it is which, in its results, most closely resembles the analytical procedure presupposed by a fully developed standard of art. A relation to popularity can be obtained by finding into how many groups series of values produced by many observers can be divided, so that each group in order shall always contain the same objects in any arrangement.

The method of (3) paired comparison is more exhaustive than the preceding, demanding the comparison of every object of a group with every other. At its best, the method is incognitive, concealing the progress and accuracy of his judgments from the observer. Each object must, of course, be placed alternately on the left or right side for comparison as it occurs, so as to prevent any error due to disadvantageous position. Thoroughgoing attention to all the objects placed for preference is secured by this method, although it has the drawbacks of wearisome length and frequent recurrence of the same object.

A plentiful source for that kind of information about the artistic mind that is obtained from volumes of studies and appreciations is found in the so-called (4) method of simple description. The process of æsthetic interpretation may reach its climax or end only after an hour or more, and nothing but a careful record of a running commentary on the whole process can be expected to clear up the broader questions concerning the start, course, nature, hindrances, and supports of the process of æsthetic appreciation.

A passage towards the pure methods of expression is found in the method (5) of production, which follows the lines of artistic creation, in so far as these can be reduced to a simple form amenable to experimental investigation. In so far as a certain amount of ability to give expression to artistic conception is presupposed, the method is, of course, one which shows clearly the nature and degree of artistic appreciation, at least whenever the æsthetic attitude may be presumed to be present. That is the basis of our appraisal of the artist by his works or of the pupils by the excellence of his attempts. But however much we may feel tempted to extend this method in our desire to follow the presence and growth of appreciation, we cannot expect to be able to apply it to all the arts whose appreciation has to be cultivated. The teacher must therefore turn the pure methods of impression into tests for appreciation if he is sincere in his desire to abandon the irrelevant tests of philological, biographical, analytical, grammatical or other heterogeneous information. The actual work of creation is, of course, a wonderful incentive to effort and to keen æsthetic pleasure, but only in rare cases would it outweigh the loss of time and effort involved. The vast majority of learners, on the

other hand, should find the methods of impression profitable and economical, if they are skilfully manipulated.

Pure methods (6) of expression determine the effect of the pleasure of various impressions upon the breathing, the pulse, the variations in blood pressure indicated by the fluctuating volume of a limb, and the like. The results of such investigations are very doubtful and of questionable value, in any case. More is obtained by the examination of the relation between æsthetic appreciation and facial expression. A close relationship of this kind is, of course, part of the ground on which the arts of figure painting and sculpture build.

3. The aim of the experiments to be described was to find some objective indication of the kind of degree of appreciation of certain visual objects in children, and of its progress, without the assumption of any standard of taste, and without any prompting or *ad hoc* instruction. It seemed at the time that the method of paired comparison was most likely to lead children into fuller æsthetic appreciation than might be mechanically suggested by the preliminary circumstances of the experiments and the simple instruction given to them at the start.* The ten children, five boys and five girls, with whom the observations were made were at the time (last quarter of 1907) attending the Holt Road Secondary School, Liverpool, to the head master of which, Mr. C. W. Bailey, I am much indebted for his kindness in selecting the children for me, and in allowing me to carry out the work in the school. Various grades of intelligence were selected to represent types of predisposition for æsthetic appreciation. Just before the experiments started the children had been taken to see an exhibition of the pictures of Holman Hunt in the Walker Art Gallery in Liverpool. Some of them were able to describe a few of these pictures, while others did not know of the Liverpool Gallery, or were unable to give its name, or could not remember any definite pictorial objects.

As objects for comparison in the first stage, coloured picture postcards, representing the arms and flags of the nations of the world, were chosen. These seemed the most appropriate, in view of Calkin's† determination that 88 per cent. of children showed a preference for a pleasantly coloured object, as against excellence of form or contour. These cards were placed before the child pair by pair in the order, *ab*, *ca*, *bc*, *db*, *cd*, *ec*, *de*, *fd*, *ef*, *ge*, *fg*, *hf*, *gh*, *ad*, *ea*, *be*, *fb*, *cf*, *gc*, *dg*, *hd*, *ch*, *af*, *ga*, *bg*, *hb*, *ch*, *ha*. A small screen hid the writer's hands, notebooks, cards, and the table from the children's gaze, who, of course, though ignorant of the purpose of their work, were still able to observe

* For further details of these methods, v. Külpe, *ibid.* p. 9 ff.

† *Psychol. Rev.* vii. 380.

that what they did and said was recorded and used in some way. The children were made to feel quite at ease, and were so, for the most part, giving their answers willingly and readily. They did not seem to be affected by any attitude suggested by guesses as to the possible effect of their doings on their credit for intelligence. At first each child was asked simply to indicate which of each two cards shown it preferred, and nothing further. After the series of comparisons had been made, they were asked to choose from the whole series laid before them the card they liked best, and, having done so, were asked why they preferred it. Each child was dealt with separately throughout. Five sets of eight cards were used, each boy and each girl beginning with a different set. Only foreign coats-of-arms were admitted to these sets, and the names of the countries were covered by the frame used to place the cards in for comparison, so that the stamp-collector's interest should not intrude upon any æsthetic appreciation. The choice of coloured coats-of-arms was made by the writer on seeing a small nephew amuse himself spontaneously by arranging in order of preference the small cards showing arms and other figures given with small packets of cigarettes and collected assiduously by all the youngsters of Britain.

4. The results of a series of such comparisons take the form of votes in favour of each card. If we obtain these figures, Card A 7 votes, B 6, C 5, D 4, E 3, F 2, G 1, and H none, it is clear that here we have a graded series of preferences, of which each one is relatively greater than the other. This may be called an ideal system of preferences. Other forms of ideal systems are possible, for example, when two or more cards are liked equally well, and half a vote is given, consequently, to each. Then we should obtain a gradation of, say, 7, 6, $4\frac{1}{2}$, $4\frac{1}{2}$, 3, 2, 1, 0 votes. An inconsistent series, on the other hand, may be said to be present when one card A is preferred to B, B is preferred to C, but C to A. That case would be represented by the figures A 7, B 6, C 4, D 4, E 3, F 2, G 2, H 0, where an examination of individual preferences shows that G is inconsistently preferred to C. Subtract one vote from G and add one to C and the series of votes then happens ideally graded. Thus, two "faults" are present in the figures A 7, B 5, C 4, D 4, E 4, F 2, G 1, H 1, for inspection again shows that H, that has otherwise no vote, is preferred to C, that has otherwise four votes, and E(3) to B(5). So far, this procedure is relatively safe, but when we find a series A 5, B, C, and D 4, E, F, and G 3, C 2, which can be reduced to an ideal form only on the assumption of seven faults, we have lost touch with the probable psychical events, for these may have actually been very

different from those assumed by the smallest possible number of faults. It is allowable to assume that where one or two faults are found, we have clear evidence that the reference of preference has changed at or before these points. This would suggest that previously no æsthetic attitude was present at all, or that, if present, it had been changed by some form of limitation. The magnitude of a fault may be seen in the number of votes that the card inconsistently preferred has otherwise in excess of the number that the card inconsistently rejected has otherwise (*i.e.* from other comparisons).

In the second stage of the experiments, which began about a week later, the reason for the preference was asked for gently after each comparison made and the answer noted without further inquiry. At the end of each series of comparisons, the card preferred to all was selected from the whole series. In the third stage, after over a month's interval, a number of questions were added in pursuance of each answer given to the first reason for preference, and the whole was followed by the serial method (No. 2, above) instead of that of choice. Finally, in a fourth stage, some two to four weeks later, all questions were omitted, in the hope that in the objective data of preferences, some influence of the intervening stages might be traced. The evidence of these that I have been able to extract from the facts is not very strong. The cards I used were rather complex objects, so that it is rather a questionable proceeding to refer from faults and their magnitude to definite underlying processes, especially in these cases, where the results of the serial method and the method of comparison do not agree. If the "faults" shown in the latter method are eliminated, one obtains what may be considered to be that arrangement of preferences which actually ruled the child's mind during its comparisons. This assumption may, however, only be made if there is a strong probability that the system of preferences is brought to its true form by the elimination of the smallest number of "faults." The probability of this, though great, is not always strong enough to convince, especially when a serial arrangement, made just after the series of comparisons, is found to agree neither with these as given, nor as reconstructed by elimination of faults. The procedure of elimination of faults may be a valid one, but its examination must be made a matter of special investigation. The results regarding faults are summarised in Table I.

TABLE I.

THE NUMBER OF FAULTS IN SUCCESSIVE SERIES.

	Stage I.			Stage II.			Stage III.			Stage IV.	
	No.	Size.	x	No.	Size.	x	No.	Size.	x	No.	Size.
Boys.											
O_1	0	0	2	0	0	0	2	1·7	0	0	0
O_2	1	2	2	1	6	0	0	0	0	0	0
O_3	1	2	0	1	2	0	2	1·5	0	3	2·3
O_4	0	0	1	2	2	0	3	2·3	0	2	1·5
O_5	2	3	0	4	2	0	1	4	0	0	0
Girls.											
O_6	1	1	0	2	2·5	0	1	1	0	?	?
O_7	4	2·5	0	1	1	0	1	2	0	1	1
(O_8)	7	2	2	2	2·2	1½	—	—	—	—	—
O_9	2	2·2	0	2	3·5	½	3	2·5	0	2	1·7
O_{10}	4	1·7	1	0	0	0	1	2	0	2	1
Average of 9 ...	1·6	1·6	0·6	1·4	2·1	0·05	1·5	1·9	0	1·2	1

x is the magnitude of the fault as between the best by comparison and the best by simple or serial choice.

Observer No. 8 is not included in the averages, because her judgments were hopelessly erratic and she obviously did not give the slightest attention to the work. For this reason she was dropped from the experiments when the questions were made more frequent. She practically refused to answer them, not because they were hard or unpleasant, but out of pettish obstinacy. O_6 gave curious results in the last stage. It seemed impossible to correct her faults of preferences, except by the assumption that a certain card, between which and five others she was unable to decide, was the card she liked best of all!

I examined the faults of the fourth stage immediately after the series of comparisons was finished by presenting the faulty pairs to the children again without comment as a continuation of the series. O_7, O_9, and O_{10} reversed their faults spontaneously. O_7 said she had not noticed all the parts of one of the cards the first time the comparison was made, but was quite sure of her preference the second time. O_9 did not remember one of her faults. Of O_3's three faults one was reversed at the second presentation, one was confirmed, and the third I omitted to test. O_4 held to both his faults. O_6 was not tested. The method of counting faults is thus shown in the majority of cases to have an objective psychological basis, which would doubtless have held for the cases I overlooked and did not test immediately at the end of the series of comparisons.

The table shows in particular cases and on the average that the preferences of the last stage were more consistent than those of the preceding. O_1 seems to come with a taste for æsthetic comparisons, while O_2 was an intelligent boy, who took to the work after a time. O_3 and O_4 were less intelligent, while O_5 I learned to think of as "the erudite youth," who did not reach the æsthetic attitude at all till the third stage. O_6 and O_7 are the two more intelligent girls, and are followed by O_{10}, while O_9 also seemed to be rather devoid of the æsthetic attitude most of the time. These remarks are borne out by the record of the reasons for preference given by the children.

TABLE II.

THE REASONS GIVEN FOR PREFERENCE IN STAGE II.

The Observer.	1	2	3	4	5	6	7	8	9	10
The colours (and their) ...	rare	—	—	—	once	1	1	—	—	—
Brightness	—	—	1	1	—	—	—	1	2	—
Variety	—	—	—	—	—	—	—	rare	2	1
Combination	rare	1	—	—	—	1	1	1	1	2
Simplicity	—	1	—	—	—	—	3	—	—	quiet 3
The objects (and their) ...	—	—	—	2	1	—	—	—	—	—
Associations	—	—	—	—	1	—	—	—	—	—
Variety	—	—	—	2	—	—	—	—	—	—
Arrangement	—	—	—	—	—	—	2	—	—	—
Design or pattern ...	1	—	weak	—	—	—	2	1	—	—

The numbers in the table indicate the priority of the reasons given. 1, *i.e.* means "given oftenest as reason," etc.

5. In Table II. the reasons for preference are tabulated, and they show well-marked differences between the single children and between the boys as a group and the girls. The latter give a greater variety of reasons altogether, and are stronger in their appreciation of colour, but are less interested in the things depicted than the boys are. These differences become more striking in the third stage. To obtain statements of their reasons at this time, the children were told before starting the comparisons that they would be asked the reason for their preferences. After they had compared the cards, I put the question, "Why (do you prefer it)?" and allowed them to talk freely. If a vague answer was given, *e.g.* "I like the colours," I pushed the question further by asking, "What do you like about the colours?" If they were unable to express themselves, they were asked to point out what they meant. The questioning process was never pushed far, but was broken off whenever the child failed to give an answer after a question

had been put more than once, or when it showed any sign of perplexity or confusion. The child was never allowed to become shy of speaking. By careful consideration of the statements made, some idea of the spontaneity and prominence in their judgment of the various motives can be got. The following summary contains the result :—

O_1: (1) Pretty colours (which match); (2) distinctness (not simplicity); (3) accurate and symmetrical design; (4) appearance of reality (*e.g.* in the folds of a cloak). Black is abhorred; it looks sorrowful.—This boy shows ease and spontaneity in the use of these standards, and can distinguish the merit of each separately.

O_2: (1) Pleasing combination of colours; (2) shape; (3) distinctness; (4) not too many colours; (5) natural or real look; the absence of this upsets any other merit, even that of (1).—This boy shows decided preferences, but his ideas are not easily stimulated by repeated comparison.

O_3: (1) Brighter colours; (2) nice decoration, especially an interesting view or object; (3) not too much in the picture. "A plain picture is nicer to the eye." A ragged line is disliked.—This boy yields to suggestion easily, but seems not to realise the idea suggested. His answers are stereotyped. Yet the process of comparison is carried out attentively, until the cards are taken from before his eyes.

O_4: (1) Bright colours and interesting, especially scenic, pictures; (2) greater variety of colours; (3) distinctness; (4) prettiness of the colours; (5) "more in it" (more objects depicted). The plain and smudgy are much disliked.—This boy can distinguish between these preferences. Though by no means unintelligent, he is not quick or keen. Still he can reach an idea by himself if sufficient opportunity is given.

O_5: (1) Greater variety of colours; (2) colours which are pretty and go well together; (3) distinctness: the central objects show up well against the background.—This boy shows great ease in using his æsthetic ideas, once he has found them. They are not numerous, but he uses them well, and discriminates sharply between different cards. He is very much occupied by his associations "by what the picture makes you think of." These, indeed, filled his whole mind during the first two stages, and were poured forth at an astonishing rate. This won him the title of "the erudite youth."

Girls.—O_6: (1) Pleasant arrangement of colours. This motive is constantly uppermost, and is based on great wealth of detail. Blue is the favourite colour. Other reasons are hardly evident; perhaps (2) shape; (3) in one case, a pleasing view in the middle of the picture. The following reasons were accepted when suggested: (*a*) brighter colours; (*b*) larger number of colours, but not too many.

O_7: (1) The shape is usually mentioned; (2) the combination of colours; (3) their brightness—black is dreary, and is disliked; (4) pleasant arrangement of objects depicted, as also a view in the centre; (5) more colours in the same space; (6) plainness, as against showiness: this is often overruled by other motives; (7) uncommon features.—This girl gives the greatest number of reasons, which are all spontaneous. Questions put to her only serve to fix her meaning. She makes her judgments with ease and interest.

O_8 was omitted at this stage.

O_9: (1) Shape; (2) colours, especially the bright ones—plainness and black are disliked.—It was hard to get any reasons from this girl at all, though she was reported to be an excellent scholar. Her typical answer was, "I don't know why." She is of Jewish extraction.

O_{10}: (1) Variety — of colours, shapes, positions, and objects: there can be no doubt but this is the primary motive; (2) shape; (3) combination of colours; (4) arrangement of the objects and balance between their proportions; (5) distinctness; (6) brightness. White is the favourite colour. Plainness is obviously excluded as a motive.

It will be evident from these summaries how many of the motives for preference based upon the sensuous effects of an impression have been used by the children spontaneously, and how detailed and repeated their application is. The predominance of one or other motive in each child is one of the most interesting results. These motives, as the children bring them to school, or as they develop in them, are the basis upon which any education in æsthetic appreciation must build. It seems clear that one of the best ways to develop them is to provide opportunity for their practice. The use of the methods described provides a very natural opportunity of this kind, and the teacher could do much by variation of objects compared or arranged according to preference to cultivate a motive seldom used, or to provide an occasion for the appearance of a new motive, if not to suggest one. Spontaneous appearance is, of course, likely to lead to greater interest on the part of the child. It is hardly yet sufficiently realised how much appreciation can be cultivated by practice, and especially by practice in the conscious adoption of the æsthetic attitude. We are too much accustomed to take taste and artistic judgment for innate faculties. Apart from the psychological outfit necessary for the pursuit of some arts, it is more likely that artistic appreciation is a power as much capable of educative practice as is that of any skilled activity or profession, or even the general desire to face facts or the love of truth.

6. In a fifth stage I endeavoured to find the children's capacity for

entering into the æsthetic enjoyment of states of mind lying beyond the sensuous elements—those of characteristic perceptions, emotions, and sentiments, as well as thoughts. It is impossible to give many examples of the accounts I obtained from the children. I used a number of reproductions of pictures and views published in a good pictorial calendar. The prints were some 4 inches by 6 inches, and were cut out and mounted upon dark-green cardboard mounts, 6 inches by $8\frac{1}{2}$ inches. They made quite a pleasing impression. An example will show what the children were capable of, and how the questions were used to stimulate them.

The following records refer to a picture by J. Israels, "The Fisher of Landboort (Amsterdam)."

O_1 prefers it to another because the shading is nicer, and it looks more real. "*Q.* What is the picture meant to be? *A.* A poor fisherman going home with his boy and his baby, his net over his arm. What mood is he in? He looks as if he were thinking. And the boy? Looks as if he had no mother to look after it. The baby looks only very young, and as if it had no mother to look after it, because the fisherman wouldn't carry it along with his net if he had a wife. He looks as if he had come home from his work and had taken his children there with him. Do you think it knows the old fisherman is thinking? No, sir. It looks quite happy, doesn't it? Yes, sir. Why do you prefer the one picture to the other? The singer picture looks jolly, and the fisher sad. Do you prefer the sad? Yes, because the story is more interesting. Which picture tells its story more vividly? The fisherman. It looks as if he had lost his wife, and had left home where she was, after burying her. What do you mean by more vividly? You can tell by the faces in the fisher picture that he is thinking about his wife, but in the other picture you can't tell exactly whether it is her son the old woman is thinking about."

O_2 also prefers this picture, and likes the colouring. "What is the story? A fisherman is coming home from the sea. He seems glad to get home and to see the children. Does he look glad? I think the expression of his face shows he is glad. What else is there in the picture? There is a sea behind him. And the children? Is he thinking of them? No. What about them, then? They looked pleased to see him."

O_3 does not like the picture. "The man is taking two children away. He looks a fierce man, and the children are frightened. What makes you think that? They are looking at him."—This boy's descriptions of the pictures were very often quite beside the mark.

O_4 prefers the picture. "The fisherman is going home after

fishing, taking the children with him. What is his expression? He looks vexed. What about? Perhaps he hasn't caught any fish. What about the boy? He is looking at him. What does his look mean? He is looking at the fisherman because he's cross and that" (sort of thing). Sadness of the picture and the cross expression are disliked.

O_5 (the erudite youth) likes the picture. "You can tell he is poor. He hasn't even got boots to his feet, and the children are not well dressed. He looks tired. What about the boy? He seems as if he had had to work for his father. He is looking at the poor baby, which has hardly got any clothes. Why do you prefer this picture? Well, because I don't like to see men quarrelling (as the other picture seems to show), and because you should have pity for the poor people and be thankful that God has blessed you. Reason for preference in another comparison—because, though poor, the fisher has some one to comfort him, and I'd sooner be comforted than not, or have to sit alone and idle my time away reading books."

Girls.—O_6 prefers the picture, "because the man in it has a kinder-looking face than the man in Picture 1. They are poor people, and I think are going about the streets trying to make a living. The man seems to like the children. And what about the children? What are they doing or thinking? The boy seems to be telling the man something."

O_7 also prefers this picture. "What is the subject? The man is going from home, and is taking his children away to a place of safety, as if there were going to be a war, or else perhaps he is taking them out for a day. What is his state of mind? Is he happy or sad? I should think they are poor by their appearance; perhaps the man has lost his wife, to judge by the look on his face. And the boy? What is he doing, thinking, or feeling? He is thinking about his father, I should think. I think he's sympathising with him. And the baby? I don't think it looks very sad. It seems as if it were wondering what was the matter. It looks quite content. Which of the two pictures expresses the feeling of its subject best? I think you can tell by looking at both of them what the picture really means. Why do you prefer this one? I think it's a sad one. Is that why you prefer it? Yes."

From O_9, as already remarked, practically nothing could be elicited by question. Preferences were hardly even indicated, if present at all.

O_{10} also prefers this picture "because it is prettier. What is prettier about it? The little baby and the boy. What is the picture

about? The old man is taking care of the children. He is a fisherman. What are his thoughts or feelings? The boy is going to help the old man to fish."—This girl is shy and sensitive, and was not able to formulate any further ideas, if she had them.

The inclination and ability of the children, indicated in regard to their preferences with coloured picture postcards of arms, is well borne out in the examples of their answers just given. There are marked differences between them, but it seems quite clear that there is plenty of material upon which any teacher, who considers the training of appreciation a necessary part of education, might build. I shall, indeed, be glad if these notes on experiments, which from a special point of view were rather a failure than a success, should encourage those entrusted with the education of young persons to cultivate the æsthetic activities in them more than is usual by the comparison and preference of numbers of lovely things of any kind or by encouraging children to express themselves freely upon all aspects of beautiful objects. To love beauty and to rejoice in it is, apart from mere happiness, the main way in which we may love life and delight in unhindered activity of mind. Education must teach skilled action, knowledge of truth and goodness, but it must not omit to create the habit of delight in all that varied mental activity which art invokes. By art the mind is not only enriched but enjoyed. Neither life nor education would be complete unless conscious activity in itself were happiness.

TYPES OF CHILDREN: THEIR OBSERVATION AND NURTURE.*

By J. LIONEL TAYLER, M.R.C.S., L.R.C.P.

Lecture delivered before the London Society, February 17, 1910.

The question I would wish to raise in this lecture is this: Have we reached a point in the study of healthy child-life when, for the guidance of the school teacher, the parent and the medical practitioner alike, and perhaps also for the employer of labour and the public-health student, we must begin to seriously consider whether many normal types of health do not exist; whether many normal but different kinds of bodies and minds are not observable, and to frankly accept that these *inborn* differences demand, for their highest fulfilment, type-educational, type-home, and type-hygienic standards, and to recognise that even for the employer of labour it pays to have men and women in his employment *naturally* fitted for his class of work? Whether, in fact, mental and bodily individuality must not be from the present time onward increasingly felt in the social organisation of life?

In saying this, I do not wish to be misunderstood, and thought to be assuming that humanity can be classified in an exact and accurate manner, for such a conception would, of course, imply gross scientific ignorance; I only mean that as there are all grades of womanliness and manliness, and yet sex characteristics† are clearly definable, so there are other type characteristics besides these sexual ones, and it should, I think, be our business to discover and interpret them for the benefit of the individual, society, and the race.

When one considers that hereditarily defective individuals in most modern states do not comprise more than, at the most, a one-hundredth part of the whole, possibly even less,‡ it seems at first sight extraordinary, in view of the amount of information that exists about mongoloid, microcephalic, feeble-minded, and other defective types, that so little is known about the numerically ninety-nine times as important

* The lecture was illustrated by a considerable number of photographs.

† See list of differences in chap. x. of A. F. Chamberlain's Work on "The Child: a Study in the Evolution of Man."

‡ In England and Wales the percentage appears to be 0·4 to 0·6; in Canada, about 0·3 to 0·5.

healthy parts of our population. The reason for the greater knowledge of defective, criminal, and insane elements in national life is, however, due, as a moment's consideration will reveal, to the fact that such individuals are segregated in institutions where their whole life-habits can be observed.

That we most imperatively need to understand more about the normal majority is nevertheless shown by recent medical school statistics, and general standards of health are admittedly fallacious when applied to individual children, the treatment of remedial ill-health therefore postulates such knowledge. This still holds true, even if we allow a liberal estimate for other forms of treatment.

I shall only attempt to throw out a series of suggestions which go far to prove that many kinds of children, having different mental and physical natures, and requiring different nurtures adapted to these inherited differences, really exist.*

I shall consider first popular and then scientific opinion upon this point.

Popular Opinion.

The first point I wish to draw your attention to is that if children are all much alike, as some would claim, it is very remarkable that differences between children should be so much insisted upon. Parents nearly always mention some peculiarity of their child, of which the following are some of the most frequent examples that one meets with in medical practice and elsewhere.

Some children, particularly babies, are spoken of as being fretful, peevish, irritable; others as "contented little souls." Others, again, as being absent, silent, quiet, reserved; and yet others as vacant, dull, stupid, and either of these may be contrasted with noisy, rackety children who will not let you forget their presence. Some are merry, others serious, some thoughtless, others pensive. Sometimes a mother will say of her child "he is a deep one, he is," and although it is a little difficult to understand her meaning, for there is an element of pride in the tone of her words, yet the sort of acts the child will perform links it to the class of cunning, deceitful, sly children that form a group of themselves, and are contrasted with confiding, open dispositions. Apart from these there are others for whom the words "evil-tempered," "wicked," or "cruel" may be applied, while the purely mischievous child belongs to neither group.

* It is curious, when one reflects how we all accept the association of mental and physical characters together in animal life, how slowly we apply the same test to man.

Again, we are told of inquisitive and wondering children, always asking questions.

There is the alert, quick, and the slow child; the shy, and the demonstrative; the imaginative, sensitive, apprehensive, but by no means necessarily cowardly, and the bold, brazen, unimaginative, often bragging, little person.

Lastly, there are the deeper feelings of children: shallow, passionate, impulsive, moody, stubborn, vindictive, and the impetuous, directive, and assertive moods and hardihood of boys, and the winsome, wayward, wilful, contrary, and impressionable ones of girls, and there are girl "tomboys," and feminine-natured boys.

We are not even done with popular classifications yet, for there are children who are "greedy," a term often applied to foods of the body rather than those of the mind; and there are terms such as "selfish"—often confused with "self-centred"—and "unselfish"; and, lastly, those very wide and frequently used and misused terms of "backward," "forward," "childish," "old-fashioned," which one can scarcely pass a day without hearing mentioned.

Besides these general expressions there are others having a special significance. Some children are said to be always talking, little chatterboxes; others always staring about them; and yet others are restless little mortals who will never keep still for two or three moments together.*

What do these multitude of terms really mean? That children are very much alike or very different, and require much understanding and skill in management. Surely the latter assumption is the only one conformable with the facts. Yet, in spite of these differences, there are machines that will tell you the true weight and height that *a* child ought to be at a given age; and in our schools with their uniform examinations and our diet and exercise codes, which vary only with the exercise taken and not also with the type, we have another illustration of the truth that it takes man a long time to understand the facts that are nearest to and most readily observable by him.

* A very useful work could, I think, be carried out if the popular terms that parents use were to be collected, and an attempt be made to separate those which are popular recognitions of hereditary mind characteristics from distortions of these which our misunderstanding of child and adult individualities has given rise to. Thus, for instance, are cunning, deceit, and slyness natural features of some types of mind, or the result of educational misunderstanding? if the former, do such children develop later into habitual criminals; if the latter, ought not type-psychology to be taught to parents and teachers to prevent the perversion of mind tendencies?

Scientific Opinion.

The scientific classification of children is as yet of course only in its infancy; various forms of incomplete development or infantalism are recognised, and different degrees of sex (sexualism) are now admitted. Beyond this, "precocious" and "delayed growth" are terms often used though seldom defined, and also others such as "nervous," "hypersensitive," "neurotic," which assume that some children are mentally overstrung or unbalanced.

Now, different stages of infantalism are observable facts, as also are those of sex; but the terms "precocity" and "neurotic" express more than the evidence warrants, for it has not been proved that all forms of rapid growth are precocious, nor that all forms of added mental sensitiveness are departures from health.*

Keeping to facts, therefore, and avoiding theories, we have admittedly in children (1) sexual, (2) age, and (3) mental divergences, and to these we must now add: visual, auditive, motile and tactile types of mind, as have been shown to exist by Sir Francis Galton † and later workers.

What I would suggest is that popular and scientific observations confirm each other. That the impetuous, directive, assertive mood and hardihood of boys, and the winsome, wayward, wilful tendency of girls, as well as the recognition of the intermediate tomboy variety, are just popular estimates of inherent sex capacity which the medical man recognises in extreme as femininism in men and masculinism in women.

While words like "backward," "forward," "childish," and "old fashioned" express the general recognition of rapid and slow growth, and of degrees of ability to mature which is scientifically known as "infantalism." And restless, talkative, and "staring" children probably correspond to motile, auditive, and visual types of mind.

These resemblances are obvious enough to have occurred to most people acquainted with the habits of many children, and I only desire to point out their possible significance. *They reveal the lines of future investigation.*

It is a fact that the sexes appear to be less specialised in primitive peoples, as any illustrated work on anthropology will readily demonstrate.

* This point I have considered at some length in my volume on "Aspects of Social Evolution," particularly in chaps. iv., v. and vi., and also in a paper on "The Distinction between Individual and Collective Hygienic Problems," read at the Buxton Congress, 1908.

† See "Inquiries into Human Faculty," and later work by Drs. Thomas, Stead, etc.

It is also true that the nervous type of child is chiefly to be noticed under modern conditions of civilisation. It is at least possible that sexual and nervous specialisations are associated with advancing culture and are necessary to it.

Is it wise, therefore, in the absence of evidence on this point, to assert that the imaginative, sensitive, excitable child is less healthy in its characteristics than the more contented, placid and robust one? The nervous type of child and adult is certainly present in all advancing civilisations, *out of all proportion to, and far in excess of*, all other forms of proved degeneracy, *if it be degenerate*, quite possibly it is 20 per cent. or more of the whole population, though there are no reliable figures to establish the percentage. In 189 cases whose *mental and physical characteristics* were noted *for each individual*, I found from fifteen to twenty, fifteen quite certainly, as belonging to this type, and these were taken from the poorer class of citizen; whether there would be a larger number among those more comfortably situated I cannot positively say, but my impression is that this would be so.

All I wish to insist upon, therefore, is that as our studies of proved degeneracy have been based upon the clear association of bodily and mental characteristics, and because they are so associated most types of degeneracy are diagnosable, ought we not to proceed upon the same plan when investigating other child characteristics and not call a child "nervous," "precocious," or by any other term, unless we can clearly define and describe the type that we mean by such term.

I do not deny that there may be a form of child that is degenerate and nervous, but to generalise without evidence that all nervous children are feebler and less healthy than those that are placid and of rather a physical nature seems to me quite unscientific. I do not deny that some children who are rapid growing may be unhealthily so, but to class together the rapid growing slum child, who is a smart, cheeky, impish boy at four or five years of age, but a low-brained man at twenty, and the musical "prodigy" like Handel, Mozart, Mendelssohn and Weber, or the slow maturing but not less powerful musicians like Bach, Wagner, Schumann, and Brahms, with the feeble minded and the backward is to make confusion reign in our thoughts.

These questions are beset with difficulties, to which the undifferentiated natures of children add others. Nevertheless, I maintain that by common and by scientific acceptance the broad outlines of the study of types of normal children are already defined. We have to follow the principle already laid down by earlier workers in separating out age, sex, mental, and possibly colour differences of mind and body. We must start with no presumptions of healthiness or unhealthiness, but

work on and by facts; working on the same individual methods as medical men have always done in collecting life histories, and aiming at diagnosing disease and health states by observable associations of body and mind in *one* individual. For this, life histories or genealogies are essential, and for their production the prime factor is the educated parent. *We must be able to trace the baby girl mistaken for a boy, into tomboy girlhood, and from that into masculine womanhood. The excitable restless child of the nervous type into the man or woman of distinction or enfeeblement as the case may be.* Only by so doing can we obtain trustworthy results, and these results must first be collected by parents.

How does co-education affect the masculine woman type and the feminine woman type? How will it affect the feminine boy type, and the masculine? What is the effect of our collective school training in crushing out individuality? *Only actual records, not speculation, can show.*

Types exist, and their significance, individually, socially, and racially, must be discovered.

Let us begin with these broad facts.

1. The primitive races show closer sex resemblances than the more advanced.

Let us study masculine and feminine characteristics, and see their mental and physical significance.

2. Primitive races appear to have a shorter maturing period than civilised.

Does this physical fact denote lesser brain capacity?

3. In civilised races the features tend to be smaller, more shapely and defined, and the face in relation to the head of smaller size than in barbaric peoples.

What are precisely the meaning of these facts?

4. Why does the child's face increase relatively to the size of the head, a devolutionary characteristic, while its features become more definite, an evolutionary one, in its growth into the adult form?

Here are points of inquiry.

The Problem of Nurture.

In the state of our ignorance of type, what is to be our guide?

Clearly that laid down by Pestalozzi and Sequin of following, in teaching, the child's own natural growth.

1. The parent of a nervous, mind-desiring type of child will not try, with its lesser structural physical endowment, to force it to undergo equal physical training so that it should try to resemble its less mentally endowed sports-loving brother.

2. The feminine type of girl, with her wider hips, slighter shoulders, small hands and feet, and a more intuitive and subtle type of mind, will not be expected to learn or be taught after the manner of her more masculine sister, still less on the same lines as her brother, if he be of a strong, masculine type.

If structure means anything, and it always has significance of some kind, it means that a corresponding function to the structural divergence whether we know it or not, really exists, and it is certain we cannot go *beyond* structural capacity.

The differences I have dwelt upon are visible and demonstrable; our education and nurture of children must be at least as individual in their aims as is the structural diversity of our pupils and children.

The maxim of the parent who tries to be fair, and says "she treats all her children alike," must be abandoned. It is fair and just to treat them differently, to give to each according to his or her capacity.

Our whole method of life must become more individual as regards the child's position in the home, the child's position in the school, and the adult's in the choice of an occupation, and our guide must be Nature's ideal *as revealed in the association of bodily and mental faculties, and not any unnatural and speculative ideal we may ourselves form.* That men and women are slowly coming to recognise this, I personally regard as one of the most hopeful signs of our age.

LITTLE MOTHERS AT SCHOOL.

By DORA MANN, M.D.

Lecture delivered before the Halifax Society, October 27, 1909.

We are living in times of rapid changes, and there is probably no subject which has undergone greater transformation than our educational methods. We are still revising and experimenting, because we have not yet compiled a syllabus which can be said to be absolutely useful and satisfactory for our times. The curriculum, indeed, is becoming more overcrowded every year, but are we really in our elementary schools on the right path? That is, are we doing our best to educate the child of the working class into a thoroughly useful and competent working man and working woman?

The trend of things must be, and is, I am glad to say, towards more practical teaching. There never has been a time when we heard so much of Home Science, Domestic Economy, Baby Culture, etc., as to-day, and I hope the time is rapidly approaching when every school and college for girls will include in its curriculum preparatory classes in one or more of these subjects. Unfortunately, it takes a very long time to filter anything new through the old mass of prejudice, and it passes especially slowly into the channels where it is most needed, into the homes of the poor.

In the beginning our educational authorities looked on the child as so much brain only, and this was drilled into a certain shape, if possible; then, after years of hard drilling, we became aware that the child had a body, and that the brain depended on the well-being of this body; now we go further back still, we realise that if we want a good harvest, we must prepare the soil for the seed in the first instance, and our minds turn to the parent of the child, to the home in which the child takes root. The school of the next generation will have to be the place in which the future parent receives his and her training for future citizenship not only, but also a preparatory training for that greatest of all duties, parental responsibility. At school the rudimentary principles, on which a scientific parenthood is raised, will have to be laid. We know well by experience that if we want to do anything thoroughly and economically, we base it on scientific principles. If we wanted to

go to America nowadays, we should not think of hiring a boat and try to find that continent, each one for himself. No; we use the experience and knowledge others have gained for us, and we get there quickly and economically and safely. But the former is exactly the way we take towards parental responsibility. This most important work is left to be muddled out by each individual. Each parent crosses this boisterous and dangerous sea in his or her special boat, without compass, without knowledge, without guide, without any experience and practical help. The result is chaos, suffering, immense loss of life, and tremendous waste to both parent and community. Parental responsibility, when it comes, is undertaken with ever so light a heart, and absolute ignorance on the part of the majority.

The layman does not know or realise the dreadful waste which takes place in human life, health, and strength each day on account of this gross ignorance. Parenthood does not claim one or the other, it claims us all; if we are married or not, if we have children or we have none, we are sure to be called upon at some time or another to fill the place of parent to some one, maybe in our capacity as teacher, citizen, master, mistress, friend, doctor, lawyer, or whatever it may be. I cannot imagine a condition in life in which we can be certain not to need a knowledge of what parental responsibility means and requires, and therefore we must all be prepared for it; and our Child-Study Society, with its numerous members, convinces us that we here are awake to the call of this noblest of all social works.

Every important work in life has its difficulties, needs special qualifications and training, and to exercise parental responsibility well and wisely is no easy matter. The qualifications urgently required are, first, character; second, practical knowledge of the subject. There is no other work in life in which character is of such far-reaching importance; we never know where our influence will end for good or evil, how many lives may be made or marred by the work we do in this respect; and I think it is merciful that we cannot see—the simile of the pebble thrown into the water, forming rings around, which grow wider and wider the further they reach, may be well adapted for this work.

I know that the essence of our educational aims is to form character, but we must remember that character cannot be created at school—that is done at home by the parents; inheritance, surroundings, and associations vastly influence this creation of character—but school tries to develop character and to encourage the child to see and follow the ideals there set before it.

I should like specially to emphasise the importance of character in

our girls. Their influence will be immense, for the woman has the moulding of the future generations in her hand during the most impressionable years of their lives, when habits are formed; and we all know the importance of habits—in fact, our life is an accumulation of habits. Some one says: "Sow an act and you reap a habit, sow a habit and you reap a character, sow a character and you reap a destiny." In the girl there lies the destiny of our future men and women, the destiny of the community.

She will have the comfort and bodily welfare of her contemporaries almost entirely in her keeping; therefore, let us teach her how to make home the happiest, brightest, and cleanest spot on earth, so that husband and children rejoice each time they return to it. In her health, strength, and wisdom lie that of the present child and the future parent and citizen; how important that she should know something of the laws of nature which govern our bodies, since physique and intelligence of future generations are so dependent on her. But the wealth of a community, too, lies to a great extent on the wisdom and managing powers of its women. "Give me health and a day. He only is wealthy who owns the day," says Emerson. We must, therefore, educate our girls for this, their high calling. Let us teach them that to satisfy the lower appetite of man is no justification for their existence. Womanhood is meant to be more than that. The woman's is a great, noble, and lasting work, and we must make her realise quite early her value to the nation—the dignity and honour, which are her birthright. The moral code of a town depend, to a great extent, on its women, and what they expect from their brothers, husbands, and sons. They must demand and tolerate nothing but the highest and best from them, and if they stick to their principles they will create this high moral code.

A great deal of this teaching the girl should receive at school, and in a special practical way, in a preparatory class for housewifery and child study.

(*To be continued in Part II.*)

INQUIRY *RE* AMBIDEXTERITY IN CHILDREN.

By ALICE RAVENHILL, F.R.San.I.

The papers and correspondence on the vexed subject of ambidexterity, contributed respectively by Professor Tracey in vol. i. of "The Paidologist" and by Mr. J. O. Bevan in vol. v. of the same publication, will be still in the minds of early members of the Child-Study Society. Since that date an exhaustive discussion on the matter was presented in lecture form to the Royal Institution by Sir James Crichton Browne, F.R.S., on May 3, 1907. The definite opinion therein expressed will be also in the memories of those who were privileged to hear the lecture or to receive its reprint. It was entirely opposed to the practice of ambidexterity in children, and was based upon a mass of material, extensive and well arranged. Further support was rendered to this point of view by Professor Mott, F.R.S., in a lecture delivered last May, also at the Royal Institution, in which he pointed out that, in his opinion, though the brain acts as a whole in silent thought, in speech action the right hemisphere may be compared to the sleeping partner of a firm. That is to say, it accumulates energy, and thus reinforces the left hemisphere, but does not distribute energy, a theory which accounts for the bilateral symmetry of the hemispheres. Further, Professor Mott pointed out that right-handedness, closely associated as it is with speech and binocular vision, marks a higher stage of evolution than does ambidexterity.

In response to suggestions from Sir James Crichton Browne, F.R.S., and Professor Mott, F.R.S., Mr. Hewitt, Mill Street Higher Grade School, Macclesfield, and myself, have undertaken an inquiry on the subject, in the hope that some definite results may be the outcome.

In the interests of the well-being of children, we desire to obtain accurate information on the following points, which, to be of value must be based on actual personal knowledge of the cases recorded :—

I.
- (*a*) *How many children have you known who have been subjected to ambidextral training?*
- (*b*) *Has persistent ambidextral training been ever followed by or associated with stammering or any form of hesitancy of speech?*
- (*c*) *If so, in what proportion of the children has this occurred?*
- (*d*) *Have attempts at ambidextral training in a right-handed child been followed by deterioration in the character of the writing with the right hand?*

II. (*a*) *What number of stammering children have come under your personal observation?*
(*b*) *What proportion of these children have been* (*i*) *Right-handed?* (*ii*) *Left-handed?*

III. (*a*) *Have attempts at forcing a naturally left-handed child to substitute its right hand ever been followed by, or associated with, stammering or any form of hesitancy of speech?*
(*b*) *Have attempts at ambidextral training in a right-handed child been followed by deterioration in the character of the writing?*

IV. (*a*) *Is the writing or drawing of ambidextrous children up to the average of the class?*
(*b*) *Have you noticed any* lack of detail *in ambidextrous children?*
(*c*) *Kindly experiment, say for three months, with any ambidextrous children as follows:—*
(*i*) *Let the children choose which hand—right or left—they will use for writing or drawing, then work only with that hand.*
(*ii*) *Note if the progress in writing is any more rapid, and especially if neater.*

Details in each case are invited as to—

Sex:
Age:
Health:
Social status:
School attended — *Infant:* / *Kindergarten:* / *Elementary:* / *Secondary:*

Mr. Hewitt or I will gladly supply Forms for the recording of observations to any members of the Child-Study Society or their friends who will assist in this important matter. The inquiry is to extend to the Continent, and, if possible, the Colonies, not less than 10,000 cases being necessary to substantiate any conclusions. These Forms should be returned, or any information collected on this subject should be forwarded either to Mr. Hewitt or myself.

SUGGESTIONS FOR PARENTS AND TEACHERS.

Memorising.—"Educational psychology has investigated the various ways of learning poetry and other matter 'by heart,' and has some very definite results which will not fail to influence the time-table of the future. One result is that a series of short 'recitation lessons' spread over the week, are more effective than one long weekly 'recitation lesson.' 'Distribute your repetitions,' is the advice which the modern psychologist gives to the memoriser. There are qualifications to this advice, but with them I need not here deal. The broad fact is that the memory needs some short intervals for the 'settling down' of the various ideas acquired. Still more definite is the conclusion that if we wish to learn a poem most effectively we should not learn it 'in bits,' but as a whole. The reference here is not, of course, to enormous poems like 'Paradise Lost,' but to those of so reasonable a length as to be available for school use."—*Dr. F. H. Hayward* in an article, published in the *Head Teachers' Review*, February 18, 1910, on "Some Practical Results of Educational Psychology."

Some Effects of Physical Exercises.—In an article on physical exercises and school games—*Teachers' Guild Quarterly*, December 15, 1909, *Miss Alice Randell* writes: "In drawing up a scheme of work it is advisable to co-operate with the other teachers who take the lessons following. For instance, a writing lesson would be impossible after a gymnastic lesson with the use of apparatus. Again, some drilling classes require a great amount of brain activity on the part of the pupils, and so they will not be in a fit state for close study immediately afterwards. I have found it a general rule that the pupils are expected to come fresh for their lessons from the gymnasium; but I can assure you that it is generally the reverse."

Education through Games.—"A little girl was once explaining to a lady, whom she knew to be a teacher, a new way of playing dominoes. So that this teacher might show her children, she remarked: 'They have to count a good deal: but they'll easily understand and remember, because, you see, it's a game.'"—Article by *Miss Henrietta Brown-Smith*, on "School Life and Home Life—Life's Number Lessons," in *Child Life*, February, 1910.

Education and Home Life.—"Most little children like to think they are helping in adult occupations from an early age: even before

three they can begin. Between the ages of three and six they can help to lay the table, go errands, dust, rub up the silver, wash dishes, help to dress and feed the younger members of the family. Especially do they enjoy helping in outside work, in gardening, looking after any domestic animals; in time they will demand private possession of both land and stock—a garden and a rabbit—and of these they should have full responsibility."—*Miss Henrietta Smith*, in *Child Life*, December, 1909.

A Standard Scale of Intelligence.—The second number of what promises to be a very valuable and interesting monthly review, viz. *School Hygiene*, contains an abstract of a long paper, by MM. Binet and Simon, which appeared in the fourteenth volume of *L'Année Psychologique*, on an investigation into the possibility of determining the level of intelligence of young children, apart from their ordinary educational and scholastic acquirements. The aim was to endeavour to define by a series of tests the intellectual level appropriate to each year of age. The tests for infants are as follows: *Three years old:* Show nose, eyes, mouth; tell things on a picture; repeat two figures; repeat a phrase of six syllables; give the name of the family. *Four years old:* Give the sex; name a key, knife, and halfpenny; repeat three figures; compare two lengths (say which is shorter and which longer). *Five years old:* Compare two boxes of different weight; copy a square; repeat a phrase of ten syllables; count four single pennies; put together two pieces of card to form a whole, like a sample shown. *Six years old:* Repeat a phrase of sixteen syllables; compare the æsthetic qualities of two portraits; define familiar objects by their uses only; carry out three simultaneous orders; give their ages in years; distinguish morning and afternoon.

If a child does all but one of the tests for a year correctly, that year is to be regarded as its intellectual level. When it can correctly do five tests above these, its intellectual measure is to be increased by one year.

From Seven to Fourteen.—"From seven to fourteen years of age the child shows scarcely any intellectual originality. Although his powers of observation and his continual requests for explanations show some rational desires—for example, a pronounced tendency to combine analysis and synthesis such as lies at the bottom of all scientific method—his reasoning proceeds from particular to particular. His ideas also of size, of time and of space, are so limited, his impressions so unchecked, his credulity so great, his experience so slight, he is so much at the mercy of external perceptions, and has so little control over his attention, that we can scarcely say he thinks in the proper sense of the word. In his mind truth and error dwell together without

inconvenience. Equally indifferent to the speculations as to the interests of adults, he retains only some verbal formulas, of which he often does not try to understand the sense, except when they come into touch with his life. At the same time he retains with ease and tenacity all that he is set to learn, words as well as things, figures as well as verse, and movements better than anything. Indeed, it is rare that kinæsthetic images do not exercise on the imagination at this age a special attraction, helping to fix them rapidly in the memory and to transform them into organic habits.

"One sees therefore how important at this period training becomes. The predominance in the mind of sensory and motor states, sound health, almost passive indifference to most of the subjects taught, and more generally to the interests of adult life, the rapid progress in power of memory, which becomes yet more important by reason of the very restricted *rôle* played by reflection, such are some of the essential characteristics of this period, and such are also the essential qualities that a trainer would desire in a pupil."—From "The Place of Training in Education," by *P. Mendousse*, in *L'Educateur Moderne*, February, 1910.

Children's Ideals.—"What conclusions arise from our study? First, that the child idealises in the first place the characters of his immediate circle, that afterwards he finds his ideals among contemporaries, who, in some way or other, strike his imagination, and that he afterwards falls back upon the personages whom he has learnt to know either at school or by reading. This is no new discovery; it is only a confirmation of a known law. . . .

"We again call attention to the fact that so great a number of girls choose men for their ideal. That seems to us the more abnormal, since all anthropologists agree in affirming with Reclus 'that humanity owes to the woman all that which has made us men, for she is the creator of all the primitive elements of civilisation.' The subordination of woman does not in itself explain the fact that 26 per cent. of our girls idealise men—and, among these, very few celebrated men."—From "The Ideals of Children," by *J. Varendouch*, in *Archives de Psychologie*, July, 1908.

Growth Crises.—"The two principal crises of growth each happen at a particularly unfortunate age, about six or seven years, the age of entrance to school, and about fourteen or fifteen, when begins the preparation for the great examinations.

"The entrance to school is an important date in the life of a child who, hitherto free, finds himself shut up in a room, often dull and badly ventilated, and forced to be still, against all his instincts. This forced immobility, above all, is probably very harmful to the process of

physical development in suppressing that free motor activity which is one of its sources of necessary stimulation.

"The mind-tension and the perpetual preoccupations, which preparations for examinations cause, are also very harmful to adolescence. And it is precisely this conflict between the mind which seeks to appropriate for its needs the organic energy, and the body which does not wish to give it up, because it is necessary to the process of growth, that causes over-pressure. Often, it is true, there is no such over-pressure; the pupils, gifted with an instinct of conservation greater than the desire to pass brilliant examinations, only half work, and safely pass the danger point, happily for their health, but to the detriment of their intellectual and moral education, for they have contracted the habit of doing things by half, and from their work have obtained no benefit for the future."—From a book on "Psychologie de l'Enfant," by *Dr. E. Claparède.*

NOTES.

Papers from Provincial Societies.—The Journal Committee specially wish that papers read before the provincial societies should appear in our magazine. Of course, not all papers are of such general interest as to be best suited for publication in a journal which has to appeal to all our members and the outside public as well. But even those papers which deal with local conditions and materials may have such high value as examples in methods and work as to deserve the widest possible audience. Secretaries and others are therefore urged to inform the editor of papers which appear to them likely to be of general interest. Newspaper or other summary should be sent whenever possible.

Suggestions for Parents and Teachers.—In future numbers two or three pages will be set apart for extracts from new books, current magazines, lectures, and the like. These will be chosen with a view to indicate the nature of the works from which they are taken, and also to act as suggestions and information for parents and teachers. Also it is hoped that some of our readers will send questions for solution or discussion, and that others will send replies to the questions. It will be understood that all matter put into these pages will be strictly of a child-study nature. Suitable material for these pages will be welcomed from any one who cares to send it.

International Congresses.—The Third International Congress of School Hygiene is to be held in Paris, from August 2 to 7, this year. There are to be three general addresses, on Uniformity of method for physical examinations in schools; Sexual education; and The training and selection of the school doctor. Fixed discussions will take place on the following topics: Educational buildings and furnishings; Hygiene of residential schools; Medical inspection of schools and individual health records; Education and physical training; The prevention of contagious diseases in school; Out of school hygiene; The teaching staff, their hygiene, their relations with the homes and with the school doctor; Teaching of hygiene to teachers, scholars, and parents; Teaching methods and syllabuses in relation to school hygiene; Special schools for abnormal children; Hygiene of the eye, ear, mouth, and teeth. The general secretaries for England are James Kerr, M.A.,

M.D., and E. White Wallis, F.S.S., Royal Sanitary Institute, 90, Buckingham Palace Road, S.W.

A new international congress has been instituted, under the title "Congrès International de Pédologie. Hygiéne, Anthropométrie, Physiologie, Psychologie, (normale et anormale), Pédagogie (normale et anormale), Sociologie, Infantiles." It is initiated by Dr. Schuyten, of Antwerp, and has standing committees in various countries. The committee for England consists of Dr. Spearman, University College, London; Mr. W. Brown, King's College, London; Mr. C. L. Bart, University of Liverpool; Professor J. Welton, University of Leeds; Professor J. A. Green, University of Sheffield, who is acting as secretary of the English committee.

Child-Study Society Conference, 1910.—As announced in our January number, this is to be held at Tunbridge Wells on May 19, 20, and 21.

Conference Programme.—Thursday, May 19, 8.30 p.m.: Reception of Delegates and Members at the Town Hall, by kind invitation of Mr. and Mrs. Weldon. 9.0 p.m.: Presidential Address by Sir Jas. Crichton-Browne, M.D., LL.D., F.R.S. Chairman, E. Weldon, Esq. Friday, May 20, 9.30 a.m.: Reports from the Societies. Chairman, Sir Edward Brabrook, C.B. 11.0 a.m.: "The Social Life of a Child at a Co-Educational School," by John Russell, Esq., M.A., Head Master of King Alfred School, Hampstead. 3.0 p.m.: "The Child as Citizen," by Mrs. Higgs. Chairman, Mrs. Spender Clay. 8.0 p.m.: "The Hand as the Gate of Knowledge, and Social Relationship," by the Hon. Sir John A. Cockburn, K.C.M.G., M.D. Chairman, C. Lowry, Esq., M.A. Saturday, May 21, 9.30 a.m.: Council Meeting, 11.0 a.m.: "Result of an Investigation into the Play Interests of English Children, based on a Preliminary Examination of 10,000 Returns," by Miss Alice Ravenhill. Chairman, His Worship the Mayor, F. W. Elers, Esq., J.P.

C. Lowry, Esq., M.A., The School House, Tonbridge, will invite the Delegates to Lunch on Saturday. The Meetings will be held at the Town Hall. Hospitality will be offered to Delegates, and to Visitors from a distance as far as possible. Application should be made to Miss F. M. Watt, 35, Church Road, Tunbridge Wells.

Notes.—The aim of these is to afford a means of communication between the constituent societies, and to bring before the members such general information as is thought likely to be useful to them. Suitable items will always be welcomed.

REVIEWS.

Games for the Playground, Home, School, and Gymnasium. By Jessie H. Bancroft. Pp. 456. Macmillan. 6*s.* 6*d.* net.

This is by far the best book for teachers that I have seen, and I have recently consulted a great many. There are over four hundred games set forth, not counting the variations of many games. All the old favourites are here, with many newly invented games, and games from all parts of the world. They are arranged in the following order, and under these headings:—Miscellaneous active games; quiet games (no chasing or other vigorous exercise); feats and forfeits; singing games (with music); balls and bean bags. Following the games are indexes classifying the games, as follows: games for elementary schools, first to eighth years; games for high schools; games for playgrounds, and large numbers; games for boys' and girls' summer camps (active games, quiet games); house-party and country-club games

(active, quiet); games for children's parties (active, quiet); seashore games. In the alphabetical index "correlation with school subjects" (arithmetic, English, etc.) is given; there are also: useful advice and directions as to details in the conduct of games; a helpful discussion of the nature and uses of games; and illustrations. Each game is fully and clearly described, and the apparatus, etc., necessary for it exactly stated. Teachers may be surprised to find what a large number of games, with balls, etc., can be played in schoolrooms. Altogether it is an excellent book of reference for teachers who wish to know of good games and how to teach them.

H. H.

Infancy. Edited by T. N. KELYNACK, M.D. National Health Manuals. (Robert Culley. 1*s.* net.)

This is a miniature encyclopædia on the subject of Motherhood and Infancy by many authors. All the articles will well repay perusal by those interested in the great question of national vitality, and some of them should be carefully studied by all who wish to help in making ours a nation of good animals.

Dr. Hellier gives an admirable summary of the truths of infant anatomy and physiology.

Dr. Fowler's article on Infant Feeding is inspired by Sykes' dictum, "the only way to humanise cows' milk is to pass it through the mother," and is full of directions so practical as to make it invaluable to mothers and health visitors.

Dr. Dora Bunting contributes an interesting chapter on "Schools for Mothers," and Dr. Toogood one on "The Rôle of the Crèche," with some weighty remarks on work during pregnancy, the ways of the "minder," pauperization, and the duty of captains of industry to bear their own burden.

Dr. Buchan discusses the subject of Milk Depôts and their cost as "part of a general plan the success of which will greatly diminish the number of infants to be supplied with depôt milk."

Sir John Byers shows how little the decline of the infantile mortality has kept pace with that of the national mortality, and discusses the factors of "infant wastage" and the falling birth-rate in the light of British and foreign statistics.

In his article on "Municipal Action in the Prevention of Infantile Mortality," Dr. Sykes sets up the ideal of the maintenance of Family Life, and deprecates all action which "may in any way tend to the relinquishing of breast feeding."

There are other useful articles on the Hygiene and Ailments of Infancy and the Legal and Moral Aspects of Infant Protection; and there is a full list of references to the literature of every subject dealt with in this excellent manual.

A. B. K.

The Pedagogical Seminary, June, 1909–September, 1909. Vol. xvi. Nos. 2 and 3. Edited by Dr. G. STANLEY HALL, Worcester, Mass.

The June number contains three articles relating to the study of children of coloured races.

"The Growth of Philippine Children," by J. Franklin Bobbitt, gives the results of the measurement of 1180 boys and 438 girls between six and twenty-one years of age. Charts furnishing comparison with American boys and girls at corresponding age periods are appended.

"Some Phases of the Play of Japanese Boys and Men," by P. A. Smith, of Hiroshima Normal College, Japan, gives evidence that the plays of little Japanese boys indicate the same tendencies and instincts as those in the Western boy. The different environment, however, so acts upon him when he is older, that both in external form and spirit his play is quite different from that of the American or English lad.

"Activities of Children among Primitive Peoples," by Alexander F. Chamberlain, is the first of a series of articles dealing with this topic as recorded in recent anthropological investigations. The children here described are those belonging to certain Papuan tribes of Dutch New Guinea.

"The Feeling, Thought, and Conduct of Children towards Animal Pets," by M. A. Kaylor, is an addition to the work already done on this topic, and is supplementary to two studies previously made at Clark University, respectively called "The Cat and the Child" and "Cyno-Psychoses." The dog, cat, and canary were excluded from the list of pets in the returns sent in, and the study relates especially to children's attitude to the horse, rabbit, and parrot. The evidence shows what activities in these creatures appeal to children, and what emotional, intellectual, or moral qualities are ascribed to the pet animal by its owner. The educational value of ownership of animals is confirmed by this article, together with the child's anthropomorphic way of regarding the animal world.

"Outdoor Schools," by Eleanor W. Curtis, gives a *résumé* of this modern educational development as it has been worked out in Germany, America, and England.

S. Y.

Vol. xvi. No. 4.

This number simply contains a large number of short addresses relating to child welfare, most of which deal with some aspect of the child's physical nature. Some of the titles will reveal the character of the problems touched upon :—The Prevailing Defects in Backward Children, The Welfare of Feeble-minded Children, Day Nurseries—The Importance of Training the Growing Child in Correct Postural Habits, The Achievements and Future Possibilities of the New York Milk Committee, etc. All this testifies to the point of departure for the study of the child that has been recently accepted as the right one. It is helpful, too, to see how the same problems are exercising the minds of all who are contributing actively to the well being of the next generation in all parts of the world ; and as most of these addresses give details of some way of wrestling with the problem that has actually been tried, there is the practical value that the record of experience always carries with it.

In addition, there are other short papers giving accounts of what has been done in Sunday School Reform, Story-telling in connection with the Public Library, and other matters in which America has much to teach us.

The September issue contains an article on "Some Aspects of the Attention Problem," by H. W. Chase, Fellow in Clark University. Its object is mainly the review of recent literature dealing with attention. One conclusion reached is that no exact experiments have been made in the measurement of attention, and any deductions which depend on exact measurement of attention for their validity must therefore be accepted with care. Meumann's classification of attention types is analysed and reduced to three : differences in degree of concentration, quickness of adaptation, and duration of concentration. Other problems considered are the conditions and effects of attention, as to which there seems to be more unanimity of opinion in the authorities quoted, and the correlation between the power of attention and other mental functionings in the individual about which there seems to be considerable uncertainty. The important question to the teachers as to whether education can effect any improvement in the attention bestowed on any given material is left to some extent open, with the reservation that in view of the fundamental nature of this mental function and its dependence on the nervous system, the chance of improvement seems doubtful. A lengthy bibliography is appended.

This number also includes a series of addresses given at a Conference on Child Welfare at Clark University.

S. Y.

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Child-Study.

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FAMILY LIFE AND EDUCATION.

By SIR JAMES CRICHTON-BROWNE, LL.D., F.R.S.

Presidential Address, Tunbridge Wells Conference, June 10, 1910.

The great national, and indeed mundane, calamity which necessitated the postponement of our meeting here, and which still overshadows it and us, is suggestive of much to the student of childhood. It has produced, I do not doubt, a profound and far-reaching effect on the rising generation of this country. It has been brought home to one and all of them, who are capable of noting passing events, as something sad and stupendous, different in kind and degree from death as hitherto known to them, and, indeed, from any previous experience. It darkens their homes, interrupts their schooling, sets the bells tolling, closes the music-halls, affects their attire (for even the poorest will don a black tie or a bit of crèpe), spreads signs of mourning everywhere around, and brings words of sorrow to every lip. As they brood on all this, and feast their eyes on the pictures of the dead King and the death chamber and of the bereaved family and of the lying-in-state and funeral pageantry in the illustrated papers—and there are few children who do not get a glimpse of the illustrated paper in these days—the event becomes a node in their life-history. A deep and indelible impression is made on their plastic minds. They are endowed with ideals, those most precious of mental possessions. They get some notion—dim, it may be, but it will brighten by and by—of Nationality, of Kingship, and of the Hero.

There is scarcely a home in the land in which King Edward is not a hero to-day, in which a black-edged portrait of him is not suspended, and looked at with reverence, and made the text of many a wholesome

lesson, and thus our good King, not only in his life, but in his passing, has conferred benefits upon his people. I feel sure that this period of national mourning will have a sobering and salutary effect on our children of all classes who are in any degree capable of apprehending it. It will raise them for a little above material enjoyment or sordid cares; its influence will be felt for long years to come in quickened and deepened patriotism.

But the death of the King affords many other fruitful reflections to the student of childhood. It closed a noble life, and that noble life, we need not doubt, owed its nobility in large measure to wise guidance in the nursery and schoolroom, insuring a happy and well-ordered childhood. We still invariably refer with admiration and respect to Prince Albert, but few of us, perhaps, realize fully in these days what a truly great man he was, or how much he stood in advance of his age in all that relates to education. He foreshadowed many changes that are now in progress, and I think I could show that in his sagacious training he sowed the seeds of many of the fine traits of character which we recognize in our late King. One trait—perhaps the most striking and memorable of all—was his love of peace, a trait which we should scarcely have expected to find prominently developed in a man of the fighting caste, reared among soldiers, and of fine soldierly instincts, the head of a proud army and an all-powerful navy. King Edward will go down in history as the Peacemaker, and his pacific tendencies, which will always be thankfully remembered, were, no doubt, the expression of his broad humanity and genuine kindness of heart; but they were fostered, if not planted, in him by his father, who was also a lover of peace.

In planning and organizing the Great Exhibition of 1851, which he did in the face of strong opposition, Prince Albert had in view not only the advancement of art and industry, but, in his own words, "a realization of the unity of mankind." He had a prophet's vision of the great human family drawn together by the bond of mutual helpfulness and enlightened emulation in the arts of civilized life. This conception, set forth in a series of remarkable speeches, caught the popular imagination, and that gave it an immediate application which he had not suggested or dared to hope for, and so when the Exhibition proved a triumphant success, and men of all races and colours met in fraternity in its crystal corridors, it was proclaimed that the era of universal peace had arrived.

Swift disillusionment followed. In 1854 came the Crimean War, in 1857 the Indian Mutiny, and for years after that the doors of the Temple of Janus gaped widely in many parts of the world. But all

that did not dishearten Prince Albert, or discredit his beneficent foresight. No one knew better than he, versed as he was in the history of the past and in the stormy politics of his own period, that the halcyon days of universal peace were not to be looked for then, or even soon, but his practical genius saw that the time had arrived when an impulse towards peace should be given, even if its effective action should be long delayed, and that it was from England, with its world-wide commercial relations, that that impulse might most fitly come. And that impulse towards peace Prince Albert himself gave, although not perhaps altogether in the way he calculated. The Exhibition he inaugurated, and the many others of which it was the forerunner, have broken down barriers and promoted a better understanding and friendly feeling among the nations, but the impulse to peace he was privileged to impart was exerted mainly, I believe, in his own domestic circle. King Edward was ten years old when the Exhibition was opened. He was in constant association with his father and mother at the time when the Exhibition was their common topic of conversation. He knew the high hopes with which his father had projected it, and the ardent sympathy with which his mother regarded the undertaking, and he connected these hopes and sympathies with the beautiful fairy palace that had risen as if by magic in Hyde Park. My conviction is that at that impressionable age he imbibed that love of peace which led him in later life in some measure to realize what had been his father's dream. His father's ambition became a filial obligation, and ingrained memories of these happy days of childhood disposed him in manhood to exercise, as occasion offered, his consummate tact in promoting that sacred cause of peace which he had heard so often and so earnestly discussed at the time of the Great Exhibition.

From this episode in child-study suggested by the melancholy circumstances in which we meet, I must turn to thank you for the compliment you have paid me in placing me in the chair of the Child-Study Society—and even in doing that I have again to sound a note of sadness, for we have to deplore the death, on the 24th of last month, of the Earl of Stamford, who was President of the London Child-Study Society and Vice-President of the Childhood Society, the two societies by the amalgamation of which our present Society was formed. Lord Stamford took a deep interest in our work, presided at several of our meetings, and attended the Manchester Conference last year. His experience as a school teacher and professor, and his sensitive and sympathetic nature, enabled him to enter effectively into many of the questions which engage our attention, and the Society has suffered a grievous loss by this too early termination of his useful career. He

was earnest and yet gentle, philanthropic and practical, and was justly described by the *Times* as "a quiet, loyal, Christian gentleman." Many benevolent undertakings are the poorer because he has left us, and this Society, I know, mourns for him with one voice.

This Society, to the chair of which I succeed under such sombre circumstances, although still itself a child in point of years, displays more than adolescent activity. So great has been its activity that in looking over the papers published in its *Transactions*, and the list of lectures delivered at its instigation before constituent societies, throughout the country, I become painfully conscious that it has already covered its whole field of inquiry and left no corner to be newly broken up. No doubt there is plenty of room for deep delving, and it is that that the Society must henceforth encourage; but deep delving is scarcely suitable for a Presidential address, and the exposition of everything that has been as yet brought to light has been complete and thorough. The psychology of the child has been unravelled, as far as is at present possible, by Professors Lloyd, Morgan, Green, and Alexander, Dr. Slaughter, and Principal Findlay; its æsthetics have been exhaustively examined by Professor Watts, Dr. Beresford Kingsford, Miss Sidgwick, Miss Boreland, Miss Phipps, and Mrs. Lawrence Gomme; its physiology has been dealt with in a masterly way by Professor Sherrington, Dr. Eric Pritchard, Dr. Kerr, Dr. Crowley, and Mr. Arrowsmith; its religious difficulties have been sympathetically analyzed by Dr. Muir and Miss Nixon, and the state of its teeth has engaged the attention of Mr. Elliott. Every hygienic and educational problem has been passed under review by those who speak with authority on such subjects, by Dr. Clouston, Principal Baldwin, Professor Edgar, Dr. Kimmins, Professor Alexander Morgan; and pathological conditions have not been overlooked, for you have had papers on mental defect, aphasia, and spinal curvature. The dove, on its first excursion from the Ark, had not a more hopeless task in seeking for a rest for the sole of its foot than I have had in skimming your archives to find some novel standpoint from which I might address you this evening.

Abundant and generous acknowledgment is made by the Society throughout these archives of our obligation to childhood, to observe it, to experiment upon it, to improve it, to brighten it, to make it the sound preparation for a useful, healthy, and prosperous life; but I am not quite sure that the Society has equally acknowledged the obligation which we ourselves in our adult lives lie under to childhood, and I should like, therefore, to emphasize the fact that it is to childhood that we are largely indebted for such civilization as we possess.

In the parallel evolution of the mind and nervous system the increase

of intelligence in complexity and speciality invariably involves an increase in the length of time during which the nervous connections concerned in adjustments and associations are becoming organized. The nervous connections accompanying a simple intelligence such as that of the lower animals are already organized at birth—the chicken can peck at its food before it has fully emerged from the shell—while those accompanying a complex intelligence, such as that of man, are only slowly organized through infancy and a protracted childhood, so that for years offspring are dependent on parents for the provision of food and for protection. The rule is not an absolute one, for many of the higher vertebrate, both birds and mammals, and, in a marked degree, the anthropoid apes, are more or less helpless for a certain post-natal period, but at a comparatively early age they become able to take care of themselves. "A monkey, one month old," says Mr. Wallace, "has reached maturity, as far as locomotion and prehension are concerned, but an orang-outang at that age only begins to learn to walk, like a human infant of twelve months holding on to convenient objects of support, having been previously lying on its back, tossing about and examining its hands and feet." The lower we descend in the animal scale, speaking generally, the more completely developed is the psychical life—such as it is—of the newly born organism; the higher we ascend, the more rudimentary and imperfect, in relation to its ultimate development, are the psychical manifestations of the organism at birth. High evolution and slow maturation is the rule, both amongst the lower animals and in the human species. Infancy and childhood in which nervous connections and ideal associations are being gradually established and extended are human characteristics, and are proportioned in duration to the height and complexity to which these connections and associations finally attain. They are longer in the civilized than in the savage man, in the educated than in the uneducated classes, and, although I tremble to say so, in the male than in the female. A prolonged infancy and childhood correspond with high and vigorous mental evolution, while precocity, whatever notable exceptions may be quoted, is significant of disease or of an early stoppage in mind-growth. Negro children walk and talk months earlier than do the children of Europeans.

Now, infancy and childhood mean dependence upon parental help and protection, and in proportion to their prolongation in all species that have survived, there must have come an extension in the parental instincts and feelings from which the help and protection given to offspring proceed. Where there is no infancy, as in the oyster, there is no need of parental care, and parental affection does not exist.

Where infancy in the sense of helplessness is short, as in the case of birds, the parental feeling, although intense while it lasts, soon dies out, and offspring are afterwards in no way distinguished from other members of the same species. But where infancy is long and is merged in a protracted childhood or state of comparative helplessness, as in human beings, the parental feeling is equally drawn out and becomes reinforced by other feelings which give it lifelong permanence.

This parental feeling was designated philoprogenitiveness by the phrenologists who were pioneers in child-study, and who, however fallacious their methods may have been, collected much valuable material. It is, as they pointed out, always most energetic in the female, and in many species is confined to her. The cow and the mare are for a time extremely attached to their offsprings, while the bull and the stallion are indifferent towards them. Many curious variations in the manifestations of philoprogenitiveness occur amongst the lower animals. The dog, for instance, manifests no interest in his puppies, but the dog-fox, who is attached to one female for life, shares in all her cares, and, if she happens to be killed, will continue to provide for the young. In our own race the feeling is strongest in the female, and is early evolved in her, as the universality of the doll attests; but it is invariably latent in the male, and in both its active manifestations are intense and prolonged, in proportion to the degree and duration of weakness and disability in progeny. Parental solicitude is more comprehensive and sustained in civilized than in savage races, and it is a matter of common observation that the weak or maimed member of a family is peculiarly the object of parental affection. It is through the little child that that precious plant, maternal love, blossoming into self-denial, devotion, sympathy, and spiritual power, is revealed to us.

Now, it is this prolongation of parental feeling, or philoprogenitiveness, in co-relation with the prolongation of the period of disability in offspring, that when it reached a certain point must have differentiated merely gregarious animals into a number of small family groups. The protracted helplessness of the offspring must have kept the parents in association for longer and longer periods, as it was gradually drawn out in correspondence with their advance in intelligence and nervous complexity, and this prolonged association must have led to the establishment of interdependence between them. At length the time would arrive, and this could only occur in the human species, when there would be a succession of offsprings of different ages, but all immature and in need of assistance, though in different degrees, living together under parental protection. We should then have the family with definite permanent relationships amongst its members; parents bound

together by long companionship and common interests, children united amongst themselves by mutual aids, co-operations, loves and enmities, memories and anticipations. Enduring from birth until death, these relationships acquire a traditionary value which passes on from generation to generation, and thus there arise reciprocal necessities of behaviour between parents and children, husbands and wives, brothers and sisters, from which again arise altruistic impulses, which, when further modified by the expansion of the sympathetic feelings, give birth to moral sentiments. It is truly to the segregation into permanent family groups of individuals associated for sexual and parental functions, that we owe our emergence from barbarism and our social evolution; and as that segregation grew out of the lengthening of infancy and childhood, it is, as I have said, to infancy and childhood that we are indebted for civilization such as we possess.

No doubt in the progress of human evolution many different kinds of family groups have sprung up, some of them aberrant in form, far from idyllic in constitution. I cannot here deal with these, nor describe the coalescence of family groups into clans, nor trace out the growth of the family in historical times. In ancient Greece, although probably owing to the climate and other conditions, life was less domestic than that of Christian Europe, the idea of the family as the nucleus of society was very highly developed, and in Rome that idea was the basis of the whole social and political organization of the people. Whenever we survey mankind we find that the social fabric is founded on that family grouping which is in harmony with all the conditions and wants of human nature, and which fosters those habits and affections that are essential to the welfare of the race.

"To the naturalist," says Sir Ray Lankester, "the human population does not appear as a number of units of which a few more are females than males, but rather as a series of families, consisting of men, women, and children, bound together by a variety of reciprocal services, dependent one on another, ordered and disciplined to a distribution of functions and duties, by the tradition and experience of ages. The notion that the pater-familias is the rightful chief of his wife and children, and that through him they are represented, and should be content to be represented in the local and greater State Government, is one of long standing in civilized Europe. The powers of the pater-familias have been gradually limited, but the recent proposal to break up the fabric of the household is so sudden and strange a notion, that he seems not to have realized what it means."

It is not one recent proposal to break up the fabric of the household, but many that are being advanced at this time. Family life is being

assailed on many sides; open and insidious attacks are being made upon it. The exaltation of luxury and the deepening of poverty alike tend to its disintegration. Legislative measures and benevolent enterprises are both encroaching on it, erroneous conceptions of education tend to subvert it, and it behoves those who believe that it has been the well-spring of our civilization in the past, that it is our educational stronghold at present, and our best hope for the redemption of our people in the future, to vindicate and defend it. And in its vindication and defence this Society should, in my opinion, take a prominent part, for child-study will, I believe, supply a thousand arguments for the maintenance intact of the family tie.

It is in family life that the best kind of nurture for the child is to be found, and no substitute can ever be provided for the natural affinity that unites parents with offspring and constitutes the mother in the earlier years of immaturity, and the father in the later years, the most sympathetic and understanding guide. But nurture is for the moment at a discount; nature is paramount and nurture nowhere. An aggressive Mendelism, vaulting from peas and pigeons to humanity, tells us that men and women are not made, but born, that "permanent progress is a question of breeding, rather than of pedagogics; a matter of gammetes, not of training." Hygiene and education are, we are assured, but pleasing palliatives at the best, which in postponing but augment the difficulties they profess to solve.

Now, no one can be more deeply impressed than I am with the truths of heredity, nor with the urgent need of improving our human breed by furthering the productivity of the mentally and physically fit, but it seems to me that it is only through nurture that we can hope in the mean time to do that to any considerable degree. We may before long by segregation impose a check on the propagation of the feeble-minded, and perhaps on that of a few habitual criminals of the most pronounced type; but beyond that compulsion cannot be expected, in the present state of public opinion and sentiment, to go; and it is by making the best of such human stock as is given to us, by rearing, as far as may be under existing circumstances, sound and healthy men and women with well-balanced minds early indoctrinated with scientific and moral principles, that we may best restrain ill-omened marriages. Among the poorer classes, foolish, inconsiderate marriages from a physiological point of view are, I believe, much more frequent amongst those who have been early cast adrift or deprived of wholesome home influences than amongst those who have grown up amongst family safeguards; and amongst the affluent classes, too, I am inclined to think marriages of self-interest, without regard to physical or mental

fitness, are promoted by impairment of that higher sense of family obligation which early removal from the home circle is apt to induce.

The popularization of the results of the skilful and cautious investigations which are now going on as to the hereditary transmission of qualities and characters of various kinds will no doubt ultimately influence the public mind, and modify the tone of society on the subject of marriage; but progress will be slow, and we cannot afford to wait for it, but must apply ourselves more diligently than ever to do what is possible by nurture to supplement nature and to improve the conditions and hasten the progress of our race. With the eye of faith fixed on the dim and distant future of eugenics, we must in the mean time avail ourselves of such opportunities as are at hand for securing immediate practical results. And we may turn to nurture all the more hopefully, because it is by no means certain that its power is as restricted as it is now the fashion in some quarters to assert. Environment is not played out. Its influence on the individual is patent enough, and by its influence on the individual in the human subject in controlling his sexual selection, it may influence future generations. But in a more direct way it may perhaps, although it is at present almost scientific treason to say so, influence these by inducing variations which are transmitted to offspring. Nature is assuredly stronger than nurture, but nurture is incessantly modifying nature, and the line is not yet drawn between natural and nurtural qualities and characters in any complex organism, nor are we fully entitled to affirm that what is of nurtural origin may not by transmission become natural. In a field of any cereal crop, wheat, oats, or barley, apparently so uniform, are to be found marked differences in the plants—differences in the habit of growth, length of the straw, build of the ear, number of corns, and in the character of the awns and chaff, enormous variations indeed round the central type. These variations, we are told by the School of Experimental Plant Breeders, are of two sorts, one inherent in the individual and transmissible to offspring, the other due to some accident of nutrition and not transmissible. But no expert can in the first instance say which is which, and it is only by experiment that the distinction can be drawn, and it is clearly an assumption that the characters that are transmitted are due to a sport inherent in the plant, and not to some accident of nutrition or other environmental condition of parental life.

In his Croonian Lecture at the Royal Society a fortnight ago, Professor Klebs, of Heidelberg, described some highly interesting experiments on alterations of the development and forms of plants as a result of habit and environment. "Most of the alterations to be observed

with the *Sempervivum*, or house-leek," said Professor Klebs, "are only reactions to special external conditions, and like other variations cannot be transmitted to offspring. But experiments were made so as to answer the question whether perhaps some alterations of flowers can be transmitted. For such researches, *Sempervivum acuminatum*, which produces easily ripe seeds, was used. The seeds of flowers artificially altered and self-fertilized gave birth to twenty-one seedlings, among which four showed surprising variations in their flowers. With two seedlings all the flowers were greatly altered, and presented some of the alterations of the mother plant, especially the transformation of stamens into petals."

"It is not yet sure," adds Professor Klebs, "whether these characters are to be transmitted also to further generations, because the experiments are not finished. But from these observations, let us hope, that science will yet succeed in producing artificially new hereditary races."

May there not be an evolutionary fringe in the higher nerve centres of man, in which modifications set up by external factors such as nurture may influence the mental development of the next generation?

Are we to believe that the gradual development in the brain, and the adaptive modifications it has undergone in correspondence with changes in external conditions, arose as mutations and directly from the ovum? Environment, at any rate, has been selective of the variations that have arisen. May it not itself have determined variation?

But not only is the impotency of nurture to alter by one jot the nature of offspring denied now; but the long-accepted belief in its influence on individual traits is being called in question. Mr. David Heron, in a pioneer survey at the National Eugenics Laboratory of the University of London, of the influence of defective physique and unfavourable home environment, on the intelligence of school children, expected to find that the correlations which measured the influences of physique and home on mental capacity would be large. He anticipated that stunted growth, as measured by height and weight less than the average, that defective nutrition, and that bad home environment, as measured by uncleanliness and defective clothing, would be found detrimental to the growth of intelligence. He expected that physical defect as measured by swollen glands, enlarged tonsils and adenoids, bad teeth and poor hearing, would be closely associated with poorer intelligence, but his conclusion is that there is little sensible effect of nurture, environment, and physique on intelligence. Again, we are thrown back on heredity, and it would seem that as regards intelligence, environment does not much matter. Dirt and disease, it would seem, are as congenial to it as cleanliness and vigorous health.

But Dr. Heron's conclusions, although arrived at by the strictest statistical methods, cannot be accepted without much further evidence, as they run counter to all experience and, I may say, common sense.

The functional activity of a young brain is demonstrably and rapidly reduced by a temporary withdrawal of nourishment, and it is incredible that it should be fully maintained under protracted semi-starvation. The cerebral functions of the child nicely reflect every corporeal change, and it is incredible that these should remain undisturbed in various diseased conditions.

It would seem that the number of children included in Mr. Heron's investigation was not sufficiently large to warrant safe conclusions, and that the methods of investigation, or rather of observation, were faulty. The measure of intelligence adopted was unsatisfactory. Five grades of mental capacity were used—(1) brilliant; (2) above the average; (3) average; (4) below the average; (5) very dull and backward; but the classification of the children in these categories was left to the teachers, and how utterly untrustworthy their estimations are may be gathered from the fact that the percentage of brilliant children varies from 3 to 33 per cent. amongst the boys, and 1 to 33 per cent. amongst the girls. In one school 50 per cent. of the children were classed as brilliant, and in Standard III. of that school, out of a class of ninety-five, no fewer than eighty-three were marked brilliant. It seems to me that the feeble phosphorescence of the tuberculous children has been set down as intellectual brilliancy, and that the standardization of the teachers' judgment and a more exact measurement of mental capacity are absolutely necessary if trustworthy results are to be arrived at.

Then not more satisfactory was the evidence relied on as to the actual home environment. The condition of clothing and cleanliness were accepted as a criterion of this; but dirty children may have good homes and be well-fed, and clean children may live in hovels and be half-starved, and nothing but a systematic visitation of the homes can justify an appraisement of home conditions.

It is to be borne in mind, too, that the mental calibre of children from eight to twelve years of age, even could it be accurately measured, would afford no just criterion of their ultimate intelligence or of the degree in which that is affected by their surroundings in early years. The mind is then in a transitional period, and its rate of evolution varies very largely in different children under different conditions. Precocity is a common accompaniment of an environment that is adverse to the growth of intelligence, beyond a certain low level, or to the formation of a good character. The superficial smartness of the street gamin may be described as "brilliant," but it soon fizzles

out, while the comparatively dull wit of the little country bumpkin steadily brightens up.

Some years ago I contrasted the condition of the children as regards physical and mental development in some Board Schools in a poor district of London, and some parish schools in an agricultural district of Scotland. The London children were living in an unfavourable environment, mostly in poor and overcrowded homes, and on a meagre diet, while the Scotch children had excellent surroundings in comfortable cottage dwellings, and had abundance of fresh air and good food, including plenty of porridge and milk. The Scotch children were much better grown and healthier in appearance than the London children of the same age, but in intelligence they were by any test that could be applied inferior to them. They were comparatively dull and slow, and must have been classed as backward, while the London children were sharp and vivacious, and would have been returned as brilliant. But these Scottish children belonged to a district remarkable for the intelligence of its people and their love of learning and enterprise, and there can be little doubt that ten years later they would outstrip their London compeers in intelligence. I do not ignore racial characteristics in this connection; but there can, I think, be little doubt that the healthy country environment of these Scottish children conduced to the gradual and steady evolution of their intelligence to a high point, while the less salubrious and more stimulating town atmosphere in which the London children lived was responsible for premature activity of intelligence and the arrest of its development at a comparatively earlier stage. Had those children been examined by Mr. Heron's methods at the age of ten or twelve they would, I believe, have supplied proof of the unimportance of environment in relation to intelligence; but had they been examined again when they had reached adolescence, say at eighteen or twenty, they would have afforded proof of its potency.

As regards the particular defects mentioned by Mr. Heron—swollen glands, enlarged tonsils and adenoids, bad teeth and poor hearing—it might be shown that each of them must have some temporary effect in retarding brain growth, and even a temporary loss of time in brain growth is serious. To mention only one of them—defect of hearing—it may be pointed out that a person suffering from congenital or early loss of hearing is necessarily dumb, and unless he live in association with other individuals suffering from the same defect, or be educated by special means, his mental functions differ but little from those of the anthropoid apes, and yet we are asked to believe that London school children suffering from defects of hearing, and cut off in a greater

or less degree from aural sensory acquisitions are not thereby in any way curtailed in intelligence.

Even as regards physique, which Mr. Heron maintains has little sensible effect on intelligence, he is inclined to think that it, too, is largely independent of environment. Differences of physique in different districts, he attributes to different racial proportions in the different districts, but tadpoles have no racial distinctions, and yet Young, in 1885, showed that other conditions being constant and within considerable limits, the larger the vessel in which the tadpoles were reared the larger they grew. If you add to the environmental water of the eggs of the tadpole a little bromide of potassium, the tadpoles are hatched out without heads. Insular animals are usually smaller than continental congeners, and smaller trout are usually found in smaller streams. Many animals reported by Jordan, De Varigny, Delabbaecf, and others, if not well domesticated, seem to be reduced in size by captivity. Every form of animal life has its optimum temperature most favourable to nutrition and growth, its optimum of light, moisture, oxygen, electricity, atmospheric pressure, quality and quantity of food and drink, and if any of these show change there must be readjustment or reacclimatization, if detriment and degeneration are to be avoided.

Sir Francis Galton traced out the history of twins who had been closely alike as children and were afterwards parted, and had been originally unlike and had lived together, and found overwhelming evidence that the power of nature is far greater than that of nurture. He adds, however, "it appeared that when twins that had been clearly alike, had afterwards grown dissimilar, the date of divergence was universally referred to some illness sufficient to modify the constitution," but an illness sufficient to modify the constitution is simply a part of that environment which Mr. Heron belittles in its relation to physique or intelligence, and such diseases are rife in homes in one district, and rare in homes in another, and yet we are told that differences in physique and intelligence in the children from these homes are not to be ascribed to their environment.

Mr. Heron grudgingly concedes that some contribution, unfavourable home environment, and defective physique may make to the degree of intelligence in children, but this concession he nullifies by adding that "even if this were finally demonstrated it may be found to be possibly an indirect effect of race and stock, the abler children being those of fitter parents who give them better homes and better physiques."

No one, as far as I know, has ever maintained that environmental conditions can produce on the mentality of the child an effect at all comparable with the influence of heredity. The *tabula rasa* conception

was exploded long ago. No environment will raise a negro to the European level, although even in that case it may, when of the right sort, have marvellous results. But although it is of the second order and limited in its power, that is no reason why it should be ignored altogether, or relegated to a greatly inferior, and indeed negligible, place. It is under our control to a far greater extent than heredity can ever be, until that stage is reached when human passions have been tamed and men and women have become "dumb driven cattle" breeding according to Act of Parliament. It is our only means of improving the existing generation, and, after all, it is that that most urgently claims our attention, and it is also the most ready means of improving the next generation by rearing for them parents inoculated with improved notions of their parental responsibilities and duties.

We are all conscious in our own persons—unless we are pachydermatous—of the effect of complete changes of environment, not only on our emotions but on our intellectual grasp, and on our established habits of thought. The painful records of solitary imprisonment show that an artificially contrived environment may induce confirmed insanity; and the reports of the Society for the Prevention of Cruelty to Children teem with instances in which an almost miraculous transformation of physique and mentality has taken place in children removed from poor, pinched, and merciless home environment, and placed under favourable and humane conditions.

The late Dr. Lawrie, of Edinburgh, held a searching investigation into the state of the children in those charitable hospitals for which Edinburgh has long been distinguished, and came to the conclusion that they were dull and backward compared with children of the same age and station, living at home and attending day schools. He noticed in them a peculiar listlessness and stolidity not seen in Edinburgh children outside these hospitals, and this he ascribed, I have no doubt correctly, to the monotony of their lives, and to their being practically cut off from family life. These children were exceptionally well housed, fed and clothed, and had the best educational advantages; but they did not enjoy the affectionate and stimulating atmosphere, the constant variety, the individuality of a happy home life, and they were stunted in mentality accordingly.

I have not time to quote Poor Law experience as to the relative effects on mind growth of barrack schools and boarding out; nor to adduce other evidence that lies at hand as to the influence of environment in childhood and as to the supreme importance of family life as a factor in mental evolution.

As a part of education family life is of far greater consequence than

schooling. It is the natural climate for early mind growth, and in no other climate to which the young mind can be translated will it sprout as vigorously, spontaneously, and symmetrically. It supplies large groups of affinitive impressions that are necessary to bring into play all the different functional areas that exist in the brain and that must be timeously brought into action, if they are to take their full share in its subsequent operations. Without it, if I might so say, certain brain areas are left uncultivated and fallow.

The brain is three or four times as large in infancy as in the full-grown man in proportion to height and weight, but its essential structural elements, the cortical nerve cells of the several cerebral areas, are poorly developed, their functional powers are still latent. The electrical stimulation of the cerebral areas in new-born animals has no effect, but at a later age it produces violent convulsions. But although an infant's brain is thus inactive at birth, its growth and evolution are rapid, and by the sixth month it has nearly doubled its weight, but its growth is unequal in different regions, but at every stage not merely nutriment but appropriate stimulation is essential to the growth of every part of it.

The different functional areas into which the cerebral mantle has been mapped out, differ considerably in shape and extent in different individuals. It seems all but certain that individual variations occur in the actual extent of the histologically differentiated areas of the brain. While histological differentiation probably indicates the limits of possible educability, it does not necessarily imply the existence of functional activity. Referring to the psychomotor area of the brain, Dr. J. S. Bolton says: "Whether we consider the infinite variety of skilled movements, the numerous highly complex written and spoken languages or the wonderful gamut of expression and gesture of which the intelligent human subject is capable, we see in each case gross individual differences in educability. Histological differentiation probably supplies the key with regard to individual potentialities, but it is doubtful whether any single individual has ever approached the limit of possible educability."

But if fair advantage is to be taken of such educability as exists in the various histologically differentiated areas, their functional activity must be stimulated, and the different areas must be brought into associated action. Cases of imperfect or arrested development probably often depend on some failure in those association fibres which should knit the different regions of the brain together. The organ, then—if a crude simile may be permitted—is "spotty," and acts in limited areas, and without that co-ordinating harmony and balance which are essential

to psychical vigour. It is from the environment that all stimuli to the functional activity and higher associations of the brain are derived. A suitable environment is therefore essential to the cultivation of the brain, and the most suitable and pre-ordained environment for it in its earlier and most active period of development is in the family circle. The influence of environment on brain growth and development is probably never exhausted, but is a gradually diminishing quantity as life advances. The maternal environment of the child before birth, when the brain is growing so rapidly, has perhaps a higher significance than has yet been assigned to it, with reference not to specific maternal impressions, but to the ultimate capacity of the organ.

In connection with the importance of maintaining the natural family environment for the young of our race one cannot but contemplate with apprehension the yearly growth of our public institutions for poor and destitute children. That growth is to some extent inevitable. Homeless waifs must be provided for, and the family environment is often so bad and pernicious that removal from it is essential if corruption is to be avoided; but the tendency seems to be to lift the burden of parental responsibility on far too trifling pretexts. Of that responsibility the poor are too ready to be relieved, while the rich are too ready to shirk it. The way in which many mothers of the affluent classes delegate to hirelings their maternal duties from lactation onwards, in order that they may indulge in fashionable frivolity, is deplorable; and the way in which little boys, who should still be tied to their mother's apron string, are sent off at seven or eight years of age to preparatory schools, and after that only know their homes in the holidays, if even then, is to be regretted alike on educational and on moral grounds.

I have a strong conviction that the day school is, or ought to be, the school of the future. Incalculable is the benefit that boys derive from associating with their mothers and sisters, and from listening to the conversation of their elders. I have tried to obtain some information as to the subjects talked about at table—when they talk at all—by boys at preparatory and public schools, and find that their one topic is the games in which they are interested. Can this sort of thing, plus a classical curriculum—for which so many young minds are unfitted, and which is itself unfitted to the wants of the age—be said to amount to a liberal education? Is this narrow sort of life, in which conventions and etiquettes come to be confounded with morals, calculated to stimulate the young mind and to fortify it against the dangers which beset it—dangers which an experienced schoolmaster has described as "*the* heavy cloud over our life, the one dark fear that stalks in the

background"? Is the standard of purity in the public school comparable to that which prevails in family life?

Public schools and boarding schools are, of course, necessary, and will always hold their own. In a scattered empire and complex civilization like ours home education is impossible for great numbers of boys and girls, and the time comes when all fledgelings must leave the nest; but we need not anticipate that time, or, where the nest available, substitute for it a cage. It will assuredly be realized before long that boys educated in secondary schools with an elastic curriculum, including sound science teaching, and reared at home, are better equipped for the life struggle than boys brought up in the rigid public school course and in banishment from home influences.

But as public schools and boarding schools must always remain with us, they must be made as good as possible of their kind. Vast improvements have been effected in the last fifty years. Their whole tone has changed for the better; but reform is still needed; and I therefore commend our public schools and public schoolboys to the attention of the Child-Study Society.

No doubt the dignity of the public schoolboy will be seriously offended by the discovery that he has been made a subject of discussion by a Child-Study Society—manliness, hypertrophic manliness, being his foible. But there is still a good deal of childishness about him. His brain, however ample its contour may appear, is not yet fully fashioned; its outer cell lamina, the most important of all, is not completely evolved; his higher association centres in the frontal lobe have not yet attained their maximum control over the performances of lower centres. He is still embryological in form structure and function; and the student of the middle kingdom of childhood, just as he reaches back into infancy and fœtal life and finds much that is helpful in the building of the brain that then goes on, must stretch forward into adolescence, and follow up those changes which he has been tracing through infancy and childhood.

And the public schoolboy will, I think, ultimately have no reason to regret that he has been included in child-study, for he is still a good deal misunderstood and mismanaged. The best that is possible is not made of him.

I have no general indictment to bring against the public schools of this country. We have reason to be proud of them. They have done the state much service in their time. They impart to the boys who pass through them a pleasing polish, and afford great facilities to those who are capable of educating themselves. But like all public institutions, they are liable to ossification, and to become rigid, and

so fail to adapt themselves to changing conditions. Some of them, at any rate, hold themselves too much aloof in the shades of antiquity, and would be all the better of having a little modern light let in upon them. I recently tried to obtain information as to the revenues and expenditure of one great public school, and entirely failed to do so. It calls itself public, but keeps its accounts as secret as if it were a private adventure. Although in the enjoyment of rich endowments, given for charitable purposes, it has succeeded in keeping itself outside the purview of the Charity Commissioners. I think the public should know what our public schools are doing with the moneys entrusted to them. But more important than any fiscal revelation is it to obtain a trustworthy vidimus of their educational performances. We hear enough of their successes; but what of their failures? The achievements of their pupils in the universities, the public services, and in the flannelled field are trumpeted abroad; but we hear nothing of the unfortunate boys who are sent down or superannuated, who have suffered from infectious diseases, or whose health has given way. The medical man who in recommending any form of treatment published only the recoveries and suppressed the fatal cases would be adjudged fraudulent, but our public schools afford us no means of judging of the relative merits of their methods by a complete summary of their output, good and bad. They are fed with the finest material the country can supply—a selected class of well-bred boys, for the physically weak and the mentally defective are weeded out in the nursery or preparatory school, or by entrance examination. They have the most costly and approved educational machinery. Do they produce the finished article in quantity and quality, proportioned to the advantages they enjoy? Do they compare favourably as regards their product with, say, secondary day schools? I am not going to discuss that difficult question; indeed, my contention is that without much more information than we possess, it is impossible to discuss it profitably; but I do say that misgivings on the point have been awakened in my mind by facts which have fallen within my professional experience, and by authoritative statements that I have noted from time to time. I have seen cases in which I believe that public schools have been in some measure responsible for the development of mental disease, or for the creation of artificial stupidity, and not long ago I heard an experienced crammer say as regards the boys from one public school: "When they come to me, beyond a smattering of classics, they know nothing; in general knowledge their ignorance is colossal." The President of the Surveyors' Institute, Mr. J. C. Rogers, speaking recently said that of the candidates from the great public schools who

present themselves for the examination of the Institute—sons of well-to-do and in many instances of aristocratic parents—some were good; but as a class they were inferior in general knowledge and intelligence to candidates who had had what were regarded as fewer educational advantages.

Far be it from me to ignore or under-value the many improvements introduced into the curriculum of our public schools in recent years, but they are still, from my point of view, too much dominated by compulsory Greek, too humanistic in their studies, too little alive to the co-relation of science with life, to the need of natural knowledge as an equipment in the struggle for existence in these modern times. They require to have added to the internal movement they have developed, external pressure and guidance to be obtained as in the case of other schools, elementary, secondary, and private, of the best class, by independent inspection, medical and scholastic. I well know with what scorn the suggestion will be scouted, but I well know also that it will be adopted before long.

As regards medical inspection it may be said that our public schools already have it, as most of them have their special medical officers, but I want something more than that—a thorough and systematic examination of the buildings, and the boys, from time to time by a public official with authority to ensure that his recommendations will be carried out. Under the present *régime* all is not well. Only a few years ago, Dr. Theodore Acland satisfied himself that in one great public school the younger boys were getting an altogether insufficient amount of sleep to the inevitable retardation of brain growth and at the risk of serious nervous trouble immediate or deferred, and in four schools in which he made inquiries he found that there was a direct conflict on the sleep question, between the head master and the medical officer, the latter being of opinion that the smaller boys needed more sleep than they got, and the former being of opinion that they had quite enough, and of course the head master's view prevailed. A couple of years ago I had a conversation with a distinguished medical man from the North, who had just visited one of our great English schools. His observation was that the state of the schoolrooms was deplorable, that they would not be tolerated for a single day by a second-rate School Board in Scotland, and ought to be burnt down forthwith.

"Considerations of space," says Dr. Forsyth, "have led in some schools to the adoption of folding beds which can be shut up during the day—an indefensible arrangement, for not only does it make impossible the proper airing of beds, but it transgresses the essential rule that growing children must not be allowed to sleep in rooms which are

occupied during the daytime. For this reason the practice of requiring the older boys to use their studies for sleeping is harmful, especially as these rooms are often all too small for day use."

Only the other day I heard a parent complain that a boy in a great public school was treated during measles and pneumonia in his own little room, in which were also during a part of his illness his nurse and his mother, there being no proper means of isolation. I have heard of cases in which medical officers, advising reasonable improvements in diet and accommodation, have been flouted and accused of pandering to the luxury and self-indulgence that are eating into the heart of English boyhood, and of cases in which pure fads which medical science would condemn had been introduced without let or hindrance on the responsibility of well meaning but short-sighted preceptors.

"The greater the advance in science," says Professor Mosso, of Turin, "the greater should be," and I would add, must be, "the authority of the physician in education." It is for our schoolmasters to grasp this truth and realize that they must not only lean more than heretofore on medical advice, but must themselves acquire an elementary knowledge of physiology. It is a living, growing organism in the rearing of which they are employed, and no poring over a classical *hortus siccus* or grubbing in an antiquarian museum will enable them to perform their duties efficiently if they remain ignorant of its structure and functions. Even a slight acquaintance with the machinery engaged in the gathering in of mind stuff by the senses, in its manufacture in the brain, and distribution by the muscular apparatus, will save them from many blunders in their pedagogic enterprises.

Wisely does our most able and distinguished school medical officer, Dr. Clement Dukes, say, "Nothing short of Government inspection of our high-grade schools will ever make them approximate to an ideal condition, and even this plan would be insufficient without an annual publication of all cases of infectious diseases occurring in school."

Public school boys during their scholastic training are at a plastic and highly impressionable period of life—the springtide of character, the seedtime of many diseases, and although there has been an awakening of interest in the subject, parents and guardians are still too indifferent as to their environment at that critical epoch. There are amongst them delicate boys, boys with a family history premonishing liability to tuberculous, mental and other diseases, boys with limitations of physical, mental or moral capacity, demanding special provision, and for these the best hygienic conditions and medical supervision and advice are essential if they are to pass through their school days unscathed and fortified against future dangers.

But for all public school boys, whether delicate or not, medical supervision, analogous to the statutory medical inspection now carried out in elementary schools, must be advantageous, and is indeed now called for in the public interest. It is needed to complete our anthropometric survey of the nation. It is needed not only for protective and remedial objects, but in order to make available data of the highest value as to national physique, and as to the means which should be adopted for its improvement and for checking such degeneration as may be in progress.

The medical inspection of the children in elementary schools is now being carried out where tact and discretion are exercised, without friction or difficulty, nay, with the cheerful acquiescence of the parents, many of whom take a keen interest in it and ask for guidance; and surely the more enlightened parents of public school boys can have no objection to a similar inspection, nay, to a more frequent and minute inspection in their case. Many of those reports on public school boys sent home at the end of each term—extraordinary attempts at psychologic analysis some of them are—would cease to be puzzling or disappointing were a note by the medical inspector appended recording growth and health conditions.

But it is not only in connection with school hygiene, with site and housing, with water and food supply, with ventilation, lighting, bedding, seating, exercise, nor in connection with the corporeal and mental development of the individual boy, that the medical inspection of our public schools would prove useful. There still exist in some of them customs and practices of discipline and general management which would not long survive close medical scrutiny. One such custom existing at Eton I succeeded in materially modifying about a year ago. Incredible as it may sound, I, even I, an outsider, a Scotchman, a plebeian, a medical man, imposed at the point of the pen new rules on that ancient, august, exclusive seminary. It came to my knowledge that in one of the houses there, there existed a state of matters as regards corporal punishment which I regarded as highly reprehensible. Again I would say that I have no general indictment to prefer. The houses at Eton under the control of scholars and gentlemen are, I believe, almost without exception, conducted in the most admirable and humane way. But in this particular house the baleful licence given to the older boys to inflict physical pain on boys a little younger or weaker than themselves had degenerated, as such a licence is always apt to do, into gross cruelty, brutal punishment being inflicted on the most trivial and ridiculous grounds. As a warning word of protest uttered by a timid parent a year before had had no effect in checking

this, I thought it my duty to intervene. I know that the parents of boys at Eton, over-awed by its noble traditions and aristocratic connections, eager to avail themselves of its social advantages, or apprehensive of reprisals upon the boy, are often reluctant to make complaints even when they feel they have good reason to do so, but being uninfluenced by such considerations, I brought the matter to the knowledge of the Head Master. He promptly held an inquiry, and as the result of it, wrote to me: "I am satisfied that on the part of the older boys in this house there was an excessive and regrettable exercise by them of their authority." In view of the facts I should myself have used much stronger language, but with the promise of new regulations I was content to accept the verdict. These new regulations were soon after communicated to me by the Head Master, who wrote as follows: "I have just issued a letter of instruction to house masters containing the following orders :—

"1. That every case of caning shall be reported by the captain to the house tutor.

"2. That there must be no canings without previous consultation between the boys who are allowed to cane. (Who these are to be is left to the house tutor's discretion.)

"3. That members of 'Pop' are not to arrogate to themselves the right of caning.

"4. That only the lightest canes are to be used.

"5. The house tutor's control is to be exercised, not only over the frequency of the punishments, but their severity, that is, the number of cuts.

"I have no doubt," added the Head Master, "that any repetition of the excess of last half in one house is now rendered practically impossible."

The new regulations fell short of what I had suggested to the head master, but they were a valuable instalment, and have, I understand, had a salutary effect.

There are, no doubt, amongst us devotees of the rod, fine old crusted Draconians, with their drivelling reminiscences of their own chastisements and their chronic conviction of the efficacy of "swishing" according to Keats, who will deplore these new regulations as a concession to weakness, but humane men and women, especially those who are acquainted with the hideous history of flagellation, will welcome them as a step in the right direction.

Many Eton boys, now and to come, will have reason to be grateful to me for the part I have taken in securing this reform—small boys for the protection it will afford them against a terrorizing tyranny, big boys

for the protection it will afford them against themselves in the indulgence of that lust of cruelty that is still inherent in our animal nature, and needs firm and timely repression. Such regulations should have been adopted long ago, and without outside pressure, for, in 1903, Mr. A. C. Benson, one of the most distinguished and successful of Eton masters, reviewing his Eton career, wrote: "I may perhaps mention that I have never allowed any one but the captain the power of chastisement. When I had boys in 'Pop' I always told them privately that I do not care whether the boys think they may use the cane or not, but that I will not permit them in fact to do so; and, further, I have always required the captain to tell me beforehand, if possible, but in any case of a sudden emergency, afterwards, when and why he has used the cane."

It is not by the enforcement, by means of bodily suffering, or servile obedience to silly conventions, or to the arbitrary commands of petty despots, dressed up in a little brief and unwisely delegated authority, that the loyalty, sweet reasonableness and self-control of a boy's nature can be evoked. "The mechanical obedience of the whipped dog or horse," says Sir Ray Lankester, "is not a thing to be desired, either from children or grown men." There is a better discipline that appeals to the understanding, the sense of honour and justice and the affections, and that is based on confidence in those by whom the appeal is made. More and more, it is to be hoped, will the relics of the archaic sanguinary system of punishment disappear from those of our public schools in which they are still tolerated. The time will surely come when we shall no longer think of the schoolmaster as Carlyle pictured him, "with birch rod girt on thigh, the hero of a hundred fields of mild butchery," a vision provocative of ridicule and contempt, but as a guide, philosopher and friend, with scientific insight and special skill, tending, training, and making the best of the rising generation. It is child-study in its broadest sense that our schoolmasters require, and if the masters of our great public schools would maintain their professional status, they must apply themselves to it, for the teachers in our elementary schools, as I have reason to know, and as the records of this Society attest, are making rapid progress in it.

THE SOCIAL LIFE OF A CHILD IN A CO-EDUCATIONAL DAY-SCHOOL.

By JOHN RUSSELL, M.A.,

Headmaster of the Hampstead School of the King Alfred School Society.

Read at the Annual Conference, Tunbridge Wells, June 11, 1910.

It was not without hesitation that I accepted the invitation to contribute a paper to your Conference, because I am not in the modern sense a child-student. Like a good many of my betters, I was pitch-forked—as the saying goes—into schoolmastering, on the strength of an irrelevant degree in theology, long before child-study proper began, and though I have, I hope, kept open house to all new ideas, I have had to work chiefly in the light of the old ones, as emitted from such old-fashioned lanthorns as Pestalozzi, say, or Herbert Spencer. I have, therefore, no carefully weighed theory to set forth, based on carefully selected data. I can only offer you a number of more or less disconnected reflections suggested by the subject set to me, as viewed particularly in the light of an experience of a co-educational secondary day-school extending now over a period of nine years.

The school is small, and the children (who number at present some seventy boys and girls, of ages varying from seven to seventeen) all come from well-to-do homes. How far, and in what respects, does such a school contribute to the "social life" of its children? That is the question to which I am expected to find an answer.

But there is first another question—what exactly do we mean by "social life"? There is a sense in which all our life is "social," inasmuch as we are all members of a society, "members one of another." We are all individuals too; and our individuality is perhaps the most precious thing about us. But the touchstone of our individuality is our social effectiveness. We are entitled to our inner circles of intimacy, to our solitudes of act and thought, but there is no moment of our lives in which act and thought do not react upon character, and so no moment when we are free to repudiate our social responsibilities. Forget them we may—as we may sometimes forget that we live to work—but repudiate them never.

And so, whether we think of the great School of Life, or of the

narrow school of the schoolmaster, we see that every activity has a social bearing, that we cannot say: Parliaments and playing-fields are social; shop-keeping and arithmetic are non-social.

My first general answer, therefore, to the examination question set me would be: "All school life, whether at day-school or boarding-school, is social life." The school has no other aim but to do its part (at best only a small part in an immense problem) in helping boys and girls not only to prepare for living rational, serviceable, happy social lives when they shall be men and women, but to live such lives every present day. There *is* no time like the present. It may be sweeter for memories of the past, richer for hopes of the future, but it is to-day that we are alive, to-day that brings the golden hours, to-day that makes the inexorable demands, bears the gift of the exaltation of existence. To you and to me yesterday was but a splendid to-day; and to-morrow will but repeat the splendour. And this is even more true with children. No one is fit to be teacher—or parent—who does not realize *that*, and who does not inscribe over porch of home or school (in invisible letters, if you like) the legend, "We learn by living."

But there is a more detailed answer—an answer which shall recognize the distinction that I assume was in the minds of the framers of the question. In their sense the social life of a school may be defined as everything that is left when you take away the set lessons, the formal work of the classroom. The social life is, so to speak, the incidental life; and yet not incidental merely, inasmuch as there is much staff-organized activity and much organized environment outside the formal teaching.

I shall first consider the organized environment and the organized activities, and then the spontaneous activities of the children themselves, and I shall try in each case to show the social bearing.

Our own school environment in its main features is similar to that of other schools, and I need only say of it that it is designed (as in other schools) to encourage social habits—punctuality, orderliness effort, co-operation, mutual forbearance. But in some respects it is very dissimilar, and inasmuch as the differences are based upon a social ideal, it is essential—however contrary to etiquette it may seem—to refer to them.

First, and not least, is the fact that we are co-educational—boys and girls, men and women. The world mixes the sexes, the Church mixes them, the home mixes them—why not the school? The essential element of social life is the human relationship, the attitude of human beings to one another. Initiation into that most difficult of arts under wise guidance is the main purpose of school. But the

essential element in the human relationship is the sex relationship, the attitude of men and women to one another. And one of the main purposes of *our* school is initiation, under guidance which claims no perfection or monopoly of wisdom, into that other most difficult of arts.

Another characteristic feature of our environment is that we have neither formal religious instruction nor formal religious observance. The society includes all shades of religious opinion, so do the parents, and we have attempted a practical solution of the so-called religious difficulty by leaving the difficulty to be solved at home, and by limiting ourselves so far as religion is concerned to the presentation of a social ideal, of a conception of life as a noble co-operative enterprise, from the stress of which none can stand aloof without dishonour. Here again the ultimate appeal is to an ideal human relationship—as to the proper nature of which the world is still so tragically quarrelling.

Belief in the virtue of a frank appeal to the human dignity and sympathy that are somewhere latent in us all, has led my society to make such appeal the basis of all so-called punishment and all so-called reward. Of marks and prizes and honour-lists, of canes and lines and dishonour-lists we know nothing. In the world the only just social payment for good work is wages—an equivalent return of somebody else's good work. Social approbation may be thrown in. The only just social penalty for bad conduct is social *dis*-approbation; in extreme cases, educational coercion. Now, wages, in any true sense, are impossible in a school. The other lawful methods we use. With us, if I may say so, the individual method is everything; formulas, patterns, conventions nothing. And so it follows that our classes are quite small, seldom more than fifteen. This gives room and time for the social relationship to grow.

One other feature of our deliberately planned environment, and I have done with this first consideration. We have a workshop which we hold in great honour, and to which everybody, big and little, boy and girl, goes regularly for initiation into some elementary form of that essential element of social life—hand work. Basket-work, woodwork, metal-work, bookbinding, printing, are fundamental social activities; and however educational they may be in other respects, they are certainly most educational in this—that they prepare the mind and heart of at least the "secondary" child for some more generous view than at present obtains of the human relations between, shall I say, capital and labour—the quality of which relations profoundly affects the quality of our whole social life.

Outside the formal class-work there are two important elements in

the school life, organized, or at least controlled, by my colleagues and myself. The first, which is common to all schools, is the games; the second, which is less common, is the parliament.

Our games are cricket and hockey, both mixed. We play a good many matches with other schools, and our "teams" are always made up of boys and girls. The social lessons that are unconsciously learnt in "playing the game" are enhanced, in my opinion, when the players are men and women in the making. The moral of school games has been drawn in various ages and in various terms. Let me draw it once again, premising only that with us their importance is never allowed to be unduly exalted.

It has been too often said that Waterloo was won on the Eton playing-fields. I don't believe it was. Wellington and his officers may have learnt some of their soldiering there, but Blucher certainly did not; nor did the rank and file who bore the chief heat and burden of the day.

The coiner of the famous phrase meant, I suppose, that cricket and football teach implicit obedience—

> "Theirs not to reason why,
> Theirs but to do and die!"

Now, implicit obedience is the last thing I want taught anywhere by anybody or anything. A reasoned obedience, by which I mean obedience to the dictates of reason, the subjection of impulse and appetite to the intelligence and the will—such obedience is, perhaps, the most precious fruit of education, and such obedience, rather than the blind sort, games properly organized do seem to me to foster.

Captain and umpires are chosen for their capacity—in itself no unimportant lesson in social dynamics. Captain and umpires must be obeyed in the interest of the game and of the side. Personal dissatisfaction, unless it immediately leads to corporate dissatisfaction, must be unvoiced. Corporate dissatisfaction will lead to inquiry, inquiry may lead to suspension or removal. All this is excellent social training, especially for captains and umpires, good or bad.

But most of all, I think, I value the effect of victories and defeats—victories honourably won and modestly borne, defeats honourably suffered and bravely borne. In our daily life, "to play the game," whether winning or losing, is perhaps the chief mark of social heroism.

Parliament is the name it has pleased our fancy to give to the school legislature—a body of which I am *ex officio* president, to which my colleagues and the whole of the Senior class belong, and to which the other classes send representatives—an equal number of boys and girls—by terminal election. Its chief business is to draw up laws for

the well-being of the commonwealth, to encourage reasoned obedience, and discourage transgression.

I will not pretend that I do not possess (and very occasionally exercise) an emphatic veto. At the same time everything that it is not unreasonable to submit to the judgment of children is submitted to them; they are encouraged to speak their minds quite freely, and they know that their opinions are genuinely valued and likely to have effect.

The social economy of a school, no less than of a nation, is based on the answers to three fundamental questions. What laws shall we frame? How shall we get them obeyed? How deal with law-breakers?

That laws are not to be found anywhere ready-made and are in no sense eternal, but that they are merely the expression of the best available knowledge interpreted by the best available wisdom, and must change as knowledge and wisdom grow from more to more—that seems to me to be the first postulate of politics in home, or school, or state.

And in the course of their school life that postulate (I like to think) gradually takes its place among the fundamental social data of my children, not so much from what they hear as from what they do—from their actual share, that is, in practical law-making and, what is not less important, law-repealing.

But laws made are not necessarily laws obeyed. That obedience is not a ready-made article either, but the effect of an educated judgment, and an educated will, is another social datum of their school experience. A third—perhaps most significant of all—is that even so-called punishment, the treatment of offenders, is not the easy application of certain cut-and-dried formulæ—"Spare the rod," "Swift and sure," "A blow for a blow," "Dignity must be maintained," but the very patient application of certain principles of scientific diagnosis—Why did this thing happen? How much is to be attributed to heredity? How much to environment? How much is natural to stage of development? and further the still more patient application of certain principles of humanity.—This is a human soul as precious as your own, with rights as sacred as your own; a child is not a man; forget your greater strength and power, remember only your greater knowledge, your greater wisdom, your greater power of love.

My legislative duties as head of the school parliament, my executive duties as head of the school tribunal, are performed in the spirit of such conceptions as those, and something of that spirit, which I believe to be of immense social significance, is caught sooner or later (I like to think) by most of my boys and girls. But I am something more than President of a Republic, and a Lord Chief Justice. Though our school is not a Church (at least in Mr. Skrine's sense in his "Pastor Agnorum")

I am also its spiritual head, the pastor of my flock. This spiritual function dominates parliament and tribunal, playing-fields and class-room, but by nothing are such constant demands made upon it—demands chiefly for unobtrusive guidance—as by my children's manifestation of personality and character in their spontaneous intercourse with each other. There, but for the absence of the ultimate economic relation and the ultimate sex relation, you have the life of men and women in miniature—life with the daily clash of love and hate, knowledge and ignorance, strength and weakness, truth and falsehood, kindness and cruelty, fair-dealing and cheating, generosity and greed, modesty and conceit; life which betrays nearly every aspect of the strife of flesh and spirit, which is unceasingly the arena of the conflict of wills and temperaments.

To watch this conflict, and so far as possible to be to each fighter—in spite of Sir Austin Feverel's failure with Richard—a Providence, is surely the schoolmaster's supreme task. "If immeasurable love were perfect wisdom," comments Meredith, "one human being might almost impersonate Providence to another. Alas! love, divine as it is, can do no more than lighten the house it inhabits—must take its shape, sometimes intensify its narrowness—can spiritualize, but not expel, the old life-long lodgers above stairs and below." There are "life-long lodgers above stairs and below" even in a little child, and we may be grateful to Meredith for reminding us so cogently both of our duty and our limitations.

It is because I believe in spiritualization rather than expulsion that I allow my children a very large measure of freedom, encourage spontaneity of all kinds, foster individual tastes and gifts, and work to no one pattern. In that way alone is the whole personality to be revealed, the life-long lodgers most in need of spiritualization to be discovered.

Let me give one or two concrete instances of what I mean. To buy and sell, to lend and borrow, are essential social acts, however much harm may result from their abuse. To children their use—and abuse—comes almost instinctively. Are they therefore to be forbidden—expelled? No, they are to be spiritualized—as far as possible permitted under certain educative conditions. With us, foreign stamps and other exchangeable commodities, may only be "swopped" (as the school phrase goes) before a committee of arbitration, consisting generally of child-experts.

Buying and selling for money are, indeed, discountenanced—practically forbidden—for the following reasons, which are now and again explained to the children as part of their social (may I say moral?)

education. Children's possessions are entrusted to them, not for sale, like the possessions of a shopkeeper, but for use. They are not even to be given away without permission from home. To determine the fair value in exchange of any article is a puzzling problem for grown-up, thoughtful people, and is practically impossible for children, so that neither buyer nor seller would be sure of a fair equivalent.

The borrowing of money is only permitted from members of the staff—preferably from myself—and even though it be but a penny, must be recorded on an I.O.U.

Other troublesome life-long lodgers are the instincts to quarrel and to fight. I do not forbid either, but at the first sign of tears or blows my officers intervene, and generally I myself claim the privilege of arbitrating. Then the hot blood quickly cools, not in the least (as I believe) in deference to my wishes, but at the calming touch of reason. When reason fails to calm (as it sometimes does), I offer a bout with the boxing-gloves in the presence of myself and one other colleague, if permission can be obtained from home. The offer has never been accepted.

I have referred to the element of co-operation in the school games as an important social datum. There is the same element in our school-parties. At least once a term there is an entertainment (sometimes private, sometimes open to parents and old pupils), which is organized as far as possible by the children themselves. Generally each class performs a little original play, while the seniors in addition levy a small general poll-tax for refreshments, which they lay out in their own way. I do not say the staff do not collaborate, but the initiative is with the children, and among them is the essential collaboration. It is all very simple, but it affords excellent practice in the art of giving and taking.

Before I attempt to sum up, I ought, perhaps, to say that there is one rather popular form of social activity that finds no place with us. I mean that we do not support "a mission," or a hospital cot, or equip Barnardo boys and girls for Canada, or even a sledge for the South Pole. My objection to asking for money for any such purpose is, firstly, that it is an indirect way of getting at the parents, whereas I prefer the appeal direct; and, secondly, that by putting unfair pressure upon children who are not really interested, it encourages a certain sort of insincerity. For the same reason I discountenance all school subscription lists, all school testimonials, and all corporate membership of leagues, guilds, societies, and associations. Our gifts in such directions must be real gifts—bits of ourselves—and if not spontaneous, must at least be the outcome of honest, uncoerced conviction.

At this point, ladies and gentlemen, I have to crave your sympathy. A capricious, if indulgent, Fate has willed that I sum up amid the (to me) unparalleled fascinations of great mountains. The Matterhorn, calling me to truancy, smiles gravely down upon my impotent words. But the still small voice of the little village down here in the valley bids me stay and say what I can. "The life of man," it urges, "has more of beauty, of mystery, and of majesty than Alps or Himalayas, than the starry heavens, or the great waters. Say what you can for it. That is your appointed task. Say what you can. Then go out to play."

I will say, then, what I can. But as always, what I say, what we all say, can only be our own individual reaction upon what we see. I see Zermatt, or London; it is all one. And the social data I deduce from what I see, the social data I strive to teach, are as follows:—

That the first condition of social life is work; the second, intelligence; the third, love. Work supplies the material of life, intelligence organizes it, love irradiates it.

I see, further, that no one is self-sufficing, that my work depends on and is enhanced by yours, my intelligence by yours, my love by yours. Co-operation, in a word, is the first step in any intelligent spiritualized organization of life.

I see, further, that the beauty of life is marred by individual degradation, and most grievously marred by the degradation which is not personal but social, by the social *dis*organization which allows this man to batten in idleness while that one starves in slavery. In my social data the poor man's soul is as significant, as sacred, as entitled to honour and to joy as the rich man's. I can find no place for the plural vote. Interests are equal. The man, the woman, the child, the learned, the unlearned, the saint and the sinner have each one soul and one voice.

Below me, in the village street, a soldier passes, and I am reminded (even in this peaceful valley) of the quarrellings of men, of the clash of desires. There is no social problem more urgent than this (there is, in a sense, no other social problem)—to reconcile conflicting interests, to teach us all forbearance, to draw the line between control and freedom, to devise educative penalties for anti-social acts. There is no problem more urgent, and none, I think, to which education can make such effective contribution.

Education—how much and how little it means! Just over the way, on the balcony of a little wooden house, sits a peasant woman with her baby in her arms—mother and child—a sight to which your society can never be indifferent. Why does it always move us so? "The child is father of the man!" Nay, the child is father, or mother, of the race!

In that little body lie the destinies, not only of his home, his village, and it may be of his country (where every baby *boy*, at least, carries the President's riband in his satchel), but the destinies of unnumbered generations. In a few score years the whole world, for good or for ill, will be in the hands of him and his fellow-babies.

Even if a child's own life were all, child-study would have warrant enough; but with the ever-broadening stream of destiny also in its keeping—all allowance made for human limitations—what other study can compare with it for dignity and majesty? It is the Matterhorn of the sciences, and its devotees need all the skill and patience and hardihood of the sturdy mountain path-finders, into whose strong, honest keeping we so trustfully commit the lives of our nearest and dearest.

THE CHILD CITIZEN.

By Mrs. HIGGS.

Read at the Tunbridge Wells Conference, on June 11, 1910.

The whole of education is *foresight*. We are attempting to provide the individual child with an equipment for his future. In order to do this, we gradually put him in possession of the past achievements of his race. Formerly, it sufficed to equip the individual, more or less perfectly, for a sort of universal struggle. When reading, writing, and arithmetic were perceived to be an advantage to the individual in such a struggle, a natural desire arose on the part of parents to give their children this equipment, on the part of the community to facilitate it. In this combination of desires the school had its genesis. Wherever, in the history of nations, a nation rises to that point of civilization at which an equipment of learning is necessary for success in life, there schools arise as naturally as lobsters grow claws.

But while much attention has been paid to individual evolution, so much indeed that in the eagerness to equip the individual we have over-reached ourselves, little attention has been paid to the evolution of the *community*, and to the corresponding demands of the community on the individual. The scholar of to-day closely resembles the soldier of the Middle Ages, who, just before the broad arrow and pike gave place to gunpowder, was exposed to so many dangers that he was protected from head to foot by plates of armour, so numerous and weighty that they impeded locomotion. Modern education claps on a subject here and a subject there, until there is no room for *education* in the true sense. How can you *educe* anything from a brain swaddled in the products of other brains? Pemmican may be very good for Arctic expeditions, but it is hardly food for babes.

Therefore, if I was speaking before you to-day merely to ask for the introduction of a new subject to the curriculum, to ask you to add *civics* to your list, I should for ever hold my peace. What I ask is something very different, more ambitious, yet capable, I believe, of transfiguring education itself, and of inspiring the teacher with a new enthusiasm for his profession, and of leading our ideals out on to lines of public utility.

It is the realization of *community need* in education, the prophetic vision of the future, not of the child himself alone, but of the whole community of which he is a part. Consider for a moment the course evolution itself is taking, the evolution of humanity. The industrial revolution has swept people out of the country and settled them in factories and workshops. Eighty per cent. of our population now live in cities, and only 20 per cent. in the country. Of this 20 per cent. only 10 per cent. are engaged in agriculture, and even this small percentage is diminishing at the rate of 10,000 a year. Moreover, all the capable young men desert agriculture. Mr. Ford Madox, in "The Heart of the Country," says, "There are whole stretches of territory in England where a really full-witted and alert youth of sixteen or seventeen will absolutely not be found. I visited lately eighteen farms in my own neighbourhood, covering a space of about four miles by two miles, and on this amount of ground only five boys found employment. Four of these were below the average intelligence, who had not at school passed the fourth standard, and the fifth was more stupid than they, and of all the farm labourers' families I know well, some forty-six in number, only two have youths at home, and one of these has an infirmity."

Is it not, therefore, evident that the future of England is the future of the city? Whatever may be the result in the future of the "Back to the Land" movement, the England with which we have to do is the England, in which the children with whom we are in contact, will live and rear their children in cities. If their environment is to be bettered, it must be the city that is bettered. If the city is to be bettered, the ideals, the enthusiasm, the aptitudes necessary for the forward evolution must be planted in their minds. Even now, by our neglect of a preparation for that future, we are either raising a crop of evils, or sowing the seed for a forward movement such as history has never known.

For at last in the evolution of humanity, the school has functioned as a universal provision. Swift and silent, like many of nature's evolutions, long prepared for, has been the rapid use in our midst of the spacious school palace, well equipped, with endless possibilities, outstanding among the dreary houses of dreary neighbourhoods almost like a fairy palace in comparison with the hovel. For good or for ill, the school and not the home has become the centre of the life of our English children. On what the school does for them depends their future. The home can no longer cope with their needs. Community care can alone bring them up to community requirements. Only a century ago a child brought up wholly at home, with but a smattering

of the three "R's" acquired from its parents, if trained in the ordinary habits of industry, would stand a good chance in the battle of life. Now such a child would be pushed aside, and reckoned almost an idiot, if indeed he could evade community care.

Therefore it is the child citizen we are all educating; yet I venture to say that the idea that we have completely to change our point of view has hardly yet dawned on us. Education itself is very conservative, and ancient utility often holds precedence over modern utility. For example, a boy was passed on to me, trained at a "Grammar School," aged fourteen, drilled in Latin grammar, but unable to put together, or spell correctly, an ordinary letter!

Now, what is the difference between the life superseded by the industrial evolution and our present city life? The main difference is twofold—

(1) Its infinite complexity;

(2) Its tendency to organization.

If we consider that in the period preceding this great revolution, England was mainly covered by villages, or small towns, and that even towns were often a series of villages, we may realize the change. It is a change comparable to one of the great forward movements in biology, when comparatively simple organisms gave place to more complex ones, and the forward movement was accompanied by greater complexity of structure, and especially by the functioning of organs in relation to the whole body.

So striking is the analogy that once recognized it becomes a sort of key to a new study, the Comparative Anatomy of Cities.

Compare the village fair with the city market, the store with the warehouse, the village shop with the modern emporium. Note the tendency of portions of the city to become devoted to specific uses, the formation of the manufacturing area, the business area, the suburb and, alas! the slum. You will see that we have to do with a whole new evolution bearing new relations to human life.

It is wonderful how blind we are to what goes forward under our eyes. Some day we shall have the poetry of the city. Already Walt Whitman and Edward Carpenter reach forward towards the new community sense. The poetry of the multitude in motion, the poetry of the common man woven into his place in community life, as into some beautiful tapestry. The marvellous inner evolution, the sharpening of humanity against itself, the new force born of contact. The periodic stir and hush of the sleeping and waking city, like some new creature, reborn each dawn, the rush and lull of sound as of the waves of a mighty sea. The necessity, and yet the beauty, of the life of

self-sacrifice, when each gives his daily life to toil by which not only he profits but multitudes unseen.

Why not rise to the enthusiasm of it, this marvellous life? A century ago we hardly saw Nature, now through the eyes of poets, waked to nature-love, we try to impart to children a little of what we have been taught to see. But meanwhile our most pressing need is for city-love. Each child is already "a citizen of no mean city." However poor the outward development of the city life may be, its inward development is something marvellous and beautiful. Nature works from within outward, from inward craving to outward correspondence. Before we can revolutionize our city life we must sow and plant new ideals. We must rear the child as an ideal citizen, before we can have the ideal city.

Let me, in considering how this can be done, place before you a few obvious facts, facts which I might apologize for presenting, if it were not the obvious that is often overlooked.

(1) Poor as the child's city environment may be, it is all he has. It is a rule of nature that just where a seed falls it must somehow take hold and find nutriment. Not one seed in millions finds an ideal environment, but there is a power in nature of adaptation to environment. Therefore if the city evolution is that which lies in front of us we may expect to find that the very environment of the city child which we so deplore is intended by nature to evolve new powers to cope with, develop by, and utilize that environment. That this is so is proved by the known mental quickness of the average city child as compared with the country child.

(2) It is well known that the power to idealize does not depend on environment, but on the use that is made of it. The richness of environment often hinders growth. Our most lovely flowers may grow in comparatively barren soil. "The prettiest doll in the world" may be only a rag doll after all. Instead of leading the child's thoughts as much as possible *away* from his environment, with a result of restless discontent with surroundings, we need to idealize those surroundings, and link all that is good and beautiful in the past, or in other environments, to what the child actually possesses.

(3) Especially and above all, should both the past and present be linked to the future. What is the child going to be? Is not this, after all, the crucial question? The evolution of the city life means the right organization of that life, and the right organization means the right functioning of each individual for his place in the body politic. It is the want of perception of the need for differentiation in education that leads to such wastage of education. We know how early in any embryo

cells begin to show their destination of function. Our present national education, by forcing multitudes into one groove, not only *obscures* these differences, but actually results in numbers of non-functioning individuals, human derelicts, who are a serious menace to the body politic. We are beginning to find this out. But nothing less than *the co-ordination* of education *to the needs of the community* will suffice. Every year a certain fairly definite ratio of "handicraftsmen," clerical labourers, professionals, including school teachers, are wanted. Yet we have hardly begun to select according to aptitudes and definitely train for the certain future, and resolutely to guide to right functioning the children who pass through our schools.

The co-ordination of education to the needs of the community I must leave as a burning question for much future child-study. Undoubtedly Nature, whom we must humbly follow, has provided us with differing types of children, fitted for differing community needs. To invent methods of sorting the handy child from the mentally equipped child, and the merely mentally equipped from the co-ordinating child with power of government, and to utilize the special powers of each for the most fitting place in community life may well occupy another century of progress. It will have to be done.

Meanwhile, I lay before you as practical and practicable the rearing of the child citizen in recognition of his birthright and preparation for future utility. I do not urge you to cram him with civic duties; these are but a small part of his functioning as a citizen. Everything bears on his possession and use of his special environment. His cleanliness as an individual, his conduct, not only in school, but in the streets, his possessions in all the facilities of streetage, water, gas, trams, markets, parks, playgrounds, his share in civic ceremonies, the industrial life round him, all these may be made, not by direct teaching, but by constant incidental references to minister to a *civic sense*, and fit him not for mere voting, but for a real pride in his city life.

It remains only to describe the efforts, crude and tentative it is true, a sort of pioneering of a difficult way, and yet remarkably successful, which we are making in my own town to bring home to both children and parents a civic idealism.

It was a bold stroke to dub our grey, unlovely, wind-swept, and smoky town "Beautiful Oldham" under the idea that we were going to set to work to change our environment and recover lost beauties. But idealism succeeded! The idea took root, and it was in the heart of a boy that it flowered into new purpose. The son of one of our members, a boy of about ten, suggested that we should link the children of Oldham and pledge them "to make their home and school and town

more beautiful." To get the pledge taken it was necessary to enlist the teachers. The Education offices gave us facilities; the press helped us by publication of letters; the teachers, and above all the children, responded. Soon we had a council of representative teachers from forty schools in the borough. Now every school is represented. We soon had 5000 pledged children, though every child had to pay a penny for pledge-card. The number rapidly rose to 10,000. We decided that "once a beautiful Oldhamer, always a beautiful Oldhamer." So the number is now beyond counting; but a recent invitation to B.O. children, and none but pledged children, above the first and second standards, to join in a demonstration at the opening of a new public pleasure ground, elicited on a first request a response of 3000, and we are obliged to refuse later enrolments for fear of overwhelming numbers.

But what, it may be asked, is the object and use of such an effort? It has been found an inspiration to teachers, an incentive to children, and a means of keeping before both parents and children the objective of civic enthusiasm. I look forward to the time when such a linking of child, teacher, and parent in civic idealism will be considered a necessary part of education, and formally authorized and officially blessed in every town.

Before you can marshall an army, in the very act of regimenting it, a flag is needed to which it can rally. In our unbeautiful cities such a flag is the "City Beautiful." We have but to consider the vast strides made in some cities, especially in relation to child-life, to see that it is the master ideal of the future. The Play-ground Movement of Chicago, the Vacant Land and Child Garden Movement of Philadelphia, the Trade Schools of Germany, the Child Labour Bureau Movement, the Continuation School, all point to the realization, slow or sudden, of the necessity for care of the child-citizen and his equipment for his place in the body politic. But all machinery needs driving force. It is not by piecemeal ideas carried out sporadically that we are going to change modern conditions. We need to reach out to a new set of *community senses*. We must *see* community need; we must *hear* the call of community duty; we must *taste* the sweets of joys that are shared not merely with our own families, but with our own city; we must *sense* the subtle fragrance that like sweet perfume is borne on the breeze from the lowly virtues of lowly lives. We must learn to *feel* for and with others, so that a blot on our city becomes a grief and a pain; so that we do not look to others to alter and redeem, but uprising, a living army of "well-concerned" citizens, move forward in the paths of order, usefulness, and to the surpassing beauty of the co-ordinated community life.

LITTLE MOTHERS AT SCHOOL.*

By DORA MANN, M.D.

Lecture delivered before the Halifax Society, October 27, 1909.

Our second qualification for the education of future parental responsibility is a practical knowledge of the subject.

An elementary education is required for that—the three R's have to be mastered, and that is all a good many children can do. Children differ in intellect just like their faces differ, like their digestive powers differ. One child is mentally vigorous, and its appetite must be satisfied—should be satisfied—but the other is delicate-brained, it cannot take in much at the time, only the simplest brain diet can be digested, and it should be treated accordingly. This child may be strong and healthy in other ways, may even excel with its handiwork or in some ways in which conscientiousness and steadfastness are worth more than mental cleverness. Dr. Saleeby says: "John Smith is born, not made afterwards, and so was Shakespeare"; and it is good to remember this. Is it fair to cram mental pork-pies into these unfortunate children when their brain is only fit to digest bread-and-milk? They probably would thrive and grow stronger on this, but because the authorities have decreed that so many pork-pies have to be swallowed every year, the poor teachers, often against their will and better judgment, have to cram them down, else there is trouble with the inspector! The poor child, on the other hand, who is not an imbecile nor can be classed with the weak-minded, suffers acutely from mental indigestion, and is more or less driven towards that condition. For this class of delicate-brained child a practical school would be a great boon.

But what is the special training necessary for parents?

1st. A knowledge, however simple, of the hygiene of the body.

2nd. A knowledge of the hygiene of the house.

3rd. A knowledge of food values.

4th. A knowledge of proper relations between income and expenditure.

1st. The child must know how to keep itself clean and healthy,

* Continued from p. 23.

because it is pitiful to see children recite Browning and Tennyson in a condition of filth and covered with vermin.

2nd. It must learn to keep its house clean and fit for human habitation, because a pure mind, though it may dwell anywhere, is more likely to remain pure in a clean and healthy home.

3rd. The child should know what is necessary and useful to the economy of the body, and what is useless and even disastrous to it in the way of food.

4th. It must learn to realise the possibilities of a small income, even if it is economically and well thought out.

A great many questions will become involved in this teaching—social reforms, housing questions, municipal feeding, etc., because if you teach the child what is right and proper and fit for it, it will try to get it. Both sexes require this teaching.

Besides, the girl will have to learn to cook well and economically; she must learn how to use up scraps, which is quite impossible to do in our present system of cookery class. The cooking must be based on home conditions, the utensils available in a poor home must only be used, and the cooking will have to be eaten by real people without making them ill!

The girls should also be taught how to wash and clean well and economically.

They should know how to mend neatly, and turn an old large garment into a small new one.

Then our girls should know how to wash and attend to a small child: how to feed it, how to treat it (a great many mothers do not know how to treat their children wisely), and this cannot be taught with dolly-practice; if the teaching is to be of any value, it must be real and practical.

But how and where can this practical teaching be got? I think there is only one way, and that is to have a small municipal nursery attached to some of our schools situated in the poorest districts, and to let the elder girls spend at least the last school year doing practical work in this nursery, which would give opportunities for the study of home science, domestic economy, and baby culture.

The delicate-brained child might, at the discretion of the head mistress, be sent there even earlier, so as to learn to make herself useful and be happy. Some of you may think girls between eleven and thirteen too young for this work, but I do not agree with you; at that age the girl has a great love for little children, their maternal instincts are strong and pure, and their heads are not yet filled with nonsense. They love babies because it is natural for them to love

babies, and they will be found to make good little nurses, good little mothers at school. I believe few mothers of the working classes will be found to object to this practical training of their girls.

And what a boon for the half-timer! Think of her sitting wearily at the school desk, sleepily trying to do fractions—to find Browning edifying, to enumerate the rivers in Asia—and imagine her, after a morning's dull and monotonous work at the mill, coming into this bright and cheerful nursery, where she can bustle about, sweep, tidy, cook, wash up, and, best of all, where a baby is put into her arms to be loved and love her back again, to talk nonsense to, because it is good to talk nonsense sometimes to the right people and in the right way; to speak to her of the most holy and sacred relationship in life, of purity and truth; to waken in her all that is best in human nature—unselfishness, sacrifice, gentleness, patient forbearing—a desire to cultivate good manners because the child will reflect her own bad ones if she does not care. Which do you think our girls between eleven and thirteen will prefer and gain most by for future years—the ordinary school curriculum or the practical school?

I believe a full year's practical training would never be entirely forgotten; it might lie dormant for a time, but would be called forth again if the need arose, because one does not easily forget what one has learned at that age day by day.

The girls might be divided into batches. One lot might go to the nursery itself, each girl to have the charge of one or two babies; they would wash these and dress them, and keep them clean and happy for the day; they would have to feed them regularly, put them to sleep, or take them into the schoolyard if weather permitted. Besides, these girls would be responsible for the tidiness of the nursery during the day; they would lay the tables for meals and clear it, and sweep up and tidy afterwards. Another lot might be allotted to the kitchen to cook for babies and grown-ups; to learn to serve a meal nicely and appetisingly; to wash up and clean and keep the kitchen tidy altogether, while the best and brightest might be made into monitors, housekeepers to look after stores and plan the diets for the next day. Other girls might be occupied in the sewing-room, because we should hope for many second-hand garments from kind friends to be made into clothes for the infants. Others, again, would be doing the laundry-work, so important in a nursery. Every month the workers would have to become re-allotted, so that each girl had a chance of learning the different branches.

This nursery would also be an ideal place and opportunity for the teaching of eugenics, so necessary. The girls would learn something

of the mysteries of life, of the danger of temptation, and the consequence of sin and the suffering we inflict on others if we do not fight it. Nature teaches us that what we sow we reap; and surely the sooner the children realise that the better it is for them.

It might be the very cradle of a large and universal guild of help, because the girls will take interest in their nurslings, and not grudge them advice and succour and kindly thought if they should need it later on. Reading and writing would still be kept up by writing out plans for the next day, by reading stories and games to be used for the children. Arithmetic will be carried on by their adding up the weekly cost in £ *s.* *d.* of this their household; they could make charts showing what can be done on £1 nothing per week—25*s.* Both boys and girls should be made to do that. They ought not to get into the way of putting their wages into their pockets and taking of it until it is finished; they should be taught to plan their expenditure according to their income, and a shopping afternoon once a month with toy money would soon teach them how quickly £1 disappears.

I should not like to leave out the boys altogether from this delightful nursery. Besides the joiner's shop, where they would make a good many useful objects for the nursery, they might be allowed to come and play with the babies for an hour or two, under strict supervision of course! They might learn to push the perambulators and attend to babies' urgent needs—a most necessary preparation for future emergencies. Here, again, the educational value in regard to manners, gentleness, forethought, and patience would be unique, and cannot be obtained in ordinary school life.

You may object to a municipal nursery on the ground that it will encourage women to go to the mill. I think the training proposed will do the contrary; it will give the girls a taste for motherhood and housework. Besides, the babies in the nursery will have to be paid for according to the means of the family. If the husband earns a living wage and the mother still wishes to work in the mill, the cost of the baby can be raised, so that it is not worth her while to leave her child in the nursery. But there are a great many needy mothers—widows, deserted wives, prisoners' wives, the wives of the out-of-works, the girl-mothers—who must earn the living. There is also a chance to help the working-class mother sick in bed when she has children under school age. They might be taken care of in the nursery, and thus give the mother the necessary rest and quiet and peace of mind. She would know that her babies are taken care of until she is well again, and do not lie crying and filthy in the neglected home. Neighbours often

would willingly wait on a sick mother if the children were taken care of.

Some of you may say that girls should be taught all these mothers' duties at home. But can they? Can the blind lead the blind? Will such guidance not lead to disaster? In our large manufacturing towns most of the girls are in the mill or factory until married—often until baby is on the way. Mill-life does not tend to develop characteristics necessary to successful housekeeping and motherhood. On the contrary, its very monotony kills the inventive and contriving powers so much wanted in a working woman. The young mother begins without knowledge, and has to buy her experience—so dearly! A great deal of mischief is done in the very beginning; a great many lives are maimed and lost. Then, after years of cheerful slaying of the innocents, when the infantile death-rate is rather high, and we get anxious about the future efficiency of our nation, we bethink ourselves and try to mend things. We appoint school doctors, school nurses, open-air schools for those who would not be slain; we fill our hospitals, infirmaries, asylums, workhouses, prisons with the maimed, and we are so pleased with ourselves for all we do, when it might have been cheaper and less painful to the people concerned if we had killed the dragon of ignorance before it had maimed and mauled our children, instead of our present method of running after him and extracting the remains, putting them together as well as we can, and, if too late, giving them a decent burial.

You may think about the rates! I do not think the rates would in the long run be adversely affected by such a practical scheme.

There must of course be a very well-trained, capable and tactful woman at the head of each nursery. This head is the important factor, and if we want to have a firstrate applicant, we must offer a good salary—a head mistress's salary. She would have one or more assistants to help her. Some of the girls might like to remain on and train as children's nurses, and these might receive a small wage after they are fourteen, or a grant for three years might be offered just like the pupil teachers. The trained assistants for the nursery might be chosen from the most capable of these girls who have also qualified themselves for teaching, cookery, and laundry. The children can do the rest of the work under this capable and constant supervision.

Since all the girls would spend their last school year in this practical way, the ordinary teacher's salary would be available.

The corporation has a good many empty houses, or the schools could be adapted to hold the nursery. Heat, light, apparatus would be there, and the kitchen used for evening classes would serve the

nursery during the day. The same with washhouses and sewing rooms. The cost of the babies' food would most likely be borne by the parents.

There is just another objection which is constantly made. People tell you that parental instincts ought to come naturally to us as they did in the good old times!

Are we natural any longer?

Are we not surrounded by bleak black hills, to which Nature has bid good-bye long ago? Nothing will grow on them any more, and if you look for the cause you will see the hundreds of smoking chimneys, and you will not wonder that we too are unnatural and a little smoked. To the ancient inhabitant Nature was, indeed, a kind friend; the old Briton's wife had a splendid time compared to our working man's wife. Nature did everything for her, it washed the children and the clothes they wore, it provided roots and nuts for their meal, the animals only required killing—they were eaten with very little preparation—no washing up after meals, no spring cleaning, no dusting, no washing day, Nature's ways excluded all this! As to the family, I suppose the weakling died in its infancy; fortunately for the good old times statistics of infantile mortality were not kept, and we cannot make comparisons, but I am certain that even then Nature occasionally played a trick and left out something. The artificial, unnatural beings of the present day must grapple with the problems of our day, and one of them is the education of wise and competent parents. We must try and leave the world a step further on than we found it, if possible, else we do not justify our existence. Thus we must fight ignorance, and in fighting ignorance we fight disease, incompetence, and disaster; and to be strong we must fight collectively, standing together, each one giving the strength and wisdom he or she has received, and then we shall be victorious.

SUGGESTIONS FOR PARENTS AND TEACHERS.

What Patience and Principles will do in Education.—"Once a very excitable child, eighteen months old, touching, breaking, throwing everything he could, seemed really ready, if he had once been punished for it, to become possessed by the old intruder; but it was not our plan. We bought unmatched *Sèvres* cups and Bohemia glasses, really splendid to look at, and served the child in one of them, after showing him the elegance of the pattern, the richness of the colours, everything which could please and attach him to the object. But he had no sooner drunk than he threw the glass away. Not a word was said, not a piece removed from where it fell; but the next time he was thirsty, we brought him where the fragments lay, and let him feel more thirst before we could find another glass equally beautiful. Some more were broken in the same petulant spirit; but later, he slowly dropped one, when, at the same time, he looked into our eyes to catch signs of anger. But there were none there, nor in the voice; only the composure and accent of pity for the child who could willingly incur such a loss. Since then, baby took good care of his cups and glasses, finer than ours; he taught his little fingers how to embrace with security the thin neck of one, the large body, or the diminutive handle of others. In practising these so varied handlings his mind became saving and his hands a model of accuracy."—*Dr. Edouard Seguin*, book on "Idiocy and its Treatment by the Physiological Method."

The Importance of Speed in Reading.—"Reading as a school exercise has almost always been thought of as reading aloud, in spite of the obvious fact that reading in actual life is to be mainly silent reading. The consequent attention to reading as an exercise in speaking, and it has usually been a rather bad exercise in speaking at that, has been heavily at the expense of reading as the art of thought getting and thought manipulating. With the newer and more correct ideal, much that is of the greatest value can be done for the reader in the time that was formerly given to laboriously wading through the pronunciation of the lessons. By silently reading for meanings from the first day of reading, and by practice in getting meanings from the page at the naturally rapid rate at which meanings come from situations in actual life, the rate of reading and thinking will grow with the pupil's

growth and with his power to assimilate what is read. We have seen that the rapid readers have the firmest grasp of meanings, and retain best what they read."—*Dr. E. H. Huey*, book on "The Psychology and Pedagogy of Reading"—a book which every teacher, who wishes thoroughly to understand the subject of reading, should read.

The Home and the School.—The office of the school is very different from that of the home. The home may be a school, but the school can never be a home. . . . While there are a multitude of schools, the home is *the* school and something more. . . . School and home must not strive to shift upon each other, but to share with each other the task of child-rearing and state-upbuilding . . . the home the preparatory department of the school, the school the outdoor branch of the home. But it must never be forgotten that it is the home and not the school that must be the centre of the life of the child . . . it is the home which must help the child to *be*. That is the unique office of the home. . . . The whole duty of parents is to provide a *home* for their children. . . . A home is built, not by what parents *have*, but by what they *are*. . . . Homes are not so much places fit for children to live in as places in which to fit children for life."—*Stephen S. Wise*, on "Parent and Child," in *The Parents' Review*, June, 1910.

The Hand in Human Development.—"Our argument . . . has shown Man, by the power of the Hand (as the ready instrument of the mind) accommodated to every condition. . . . We first see the hand ministering to his necessities, and sustaining the life of the individual. In a second stage of his progress we see it adapted to the wants of society, when man becomes a labourer and an artificer. In a state still more advanced science is brought in aid of mechanical ingenuity, and the elements which seemed adverse to the progress of society become the means of conducing to it. . . . And all tend to the relief from too incessant toil, and the consequent improvement of the higher faculties of his nature."—*Sir Charles Bell*, book on "The Hand."

Education according to Types of Mind.—"The problem of determining the ideational types of school-children and of discovering the course of the development of these types is important in connection with the broader question of the technique and economy of learning, and is thus intimately connected with the field of mental hygiene. . . . It has been too often assumed that there are absolutely distinct types distinguishing various persons in all phases of their thinking; that, for example, one thinks predominantly in visual, another in auditory, and still a third in motor imagery; thus we could say that subject *a* is of a visual, *b* of an auditory, and *c* of a motor type. Such a thorough-going distinction

is not applicable except in extreme cases. . . . Most subjects are of a mixed type, and, further, most use one kind of imagery in dealing with a given class of material, and still another kind when dealing with a different class. . . . Neumann has affirmed that while there may exist a pure visual type, there is no such thing as a pure auditory type. He further observes that most persons think visually when dealing with concrete objects, and in auditory-motor terms when the thought is abstract. . . . The best we can hope to do is to ascertain the predominating type for a given subject in relation to definite classes of sensory or verbal material. . . .

"An experiment recently concluded at the University of Illinois indicates clearly writing, instead of being an aid to learning, is for children up to ten years of age a distraction. . . .

"Neumann concludes from his own experiments and from the investigations of others that the ideational type of children, up to the onset of puberty, is objective-visual. They think in terms of persons, objects, concrete situations often spatially and temporally localized, while the adult, on the other hand, thinks in general verbal ideas. . . . A systematic determination and record of these types should be made for each child from year to year, throughout his school course, as far as present [and future] methods permit. . . . Neumann believes that it is wise first to teach the child in terms of his particular ideational type, and later to train him in the use of other types. . . .

"If it be true, as Neumann asserts, that the rapid learner is the rapid forgetter, and if it also be true that the rapid learner is generally acoustic-motor, while the slower thinker is more largely visual-verbal in his type, the conclusion is obvious. If we aim at rapidity of acquisition solely, then cultivate the auditor-motor type to the exclusion of other forms of ideation. If we aim at permanent acquisition, the verbal-visual type should be developed. . . . We should cultivate both types, but neither to the absolute exclusion of the other. . . . It is the business of education, as far as possible, to cultivate all types of imagination, if we wish to develop the all-round individual."—*Professor S. S. Colvin*, article on "The Ideational Types of School Children," in *The Pedagogical Seminary*, September, 1909.

THE ANNUAL CONFERENCE.

Minutes of Eleventh Council Meeting at Tunbridge Wells, June 11, 1910.

Members.—Sir Edward Brabrook, Chairman of the Council; Sir James Crichton-Browne, President of the Child-Study Society; Rev. J. O. Bevan, Miss Ravenhill, Dr. Kingsford Beresford, Mr. Tibbey, represented London; Miss Watt, represented West Kent; Mr. Arrowsmith, represented Halifax; Miss Stevens, represented Dundee; Miss Sturge, represented Cheltenham; Mr. Holman, represented Manchester; Miss Louch (Gen. Sec.); Mr. Mulford (Gen. Sec.). Dr. Kerr and Dr. Shrubsole were present, by invitation, but did not vote.

Minutes.—The minutes of the meeting held in London on April 7th, 1910, were read and signed as correct.

As business arising out of the minutes, the Treasurer submitted the audited statement, incorporating the Journal Account with the General Account. On hearing this financial statement, the President, Sir J. C. Browne, suggested that he thought the objects and work of the Society might be considered to come within the terms of the Chadwick bequest, and that an application for a grant might be made to the Trustees through Mr. Audrey Richardson, 25, Craven Street, Strand, W.C. Sir James said he was one of the Trustees and would support the application.

Communications.—A letter from the Exeter Branch was read suggesting that Professor Forster be co-opted a member of the Journal Committee. It was decided that the suggestion be referred to the Journal Committee, with the recommendation that Professor Forster be co-opted a member of the Committee.

The General Secretaries reported that an invitation had been received to appoint delegates to the Education Congress at Grimsby, and that the Secretaries had asked Mr. Arrowsmith to represent the Society at that meeting. It was decided to approve of the action of the Secretaries and to thank Mr. Arrowsmith for acting as the delegate of the Society. A letter was read from Dr. Eder, managing Editor of *School Hygiene*, offering to print in that Review the articles, reports, etc., usually printed in *Child Study*, to circulate the Review containing these articles to all the members of the Child-Study Society, and to place a member of the existing Journal Committee on the editing Committee of *School Hygiene*.

It was decided to thank Dr. Eder for his proposal, and to inform him that the Council did not see their way to accepting it.

A letter was also read from the promoters of an Empire Festival for young people, in 1911, inviting the Child-Study Society to co-operate in arranging for this festival. It was decided to thank the League for their offer and to decline it.

Assistant to the Secretaries.—The Resolution of which Mr. Holman had given notice, "That it is desirable to appoint an Assistant to the General Secretaries," was moved by Mr. Holman. While it was being considered, Mr. Mulford reported that he had asked the Chairman of the Journal Committee to relieve him of the office of Editing Secretary, and suggested that in appointing an Assistant Secretary, the work of the Journal Committee might be arranged for.

It was decided that the motion be referred to a special Committee consisting of the Chairman of the Journal Committee, Mr. Holman (the Editor), Sir E. Brabrook (Chairman of the Council), Mr. Tibbey, and the General Secretaries, with power to act.

Arrangements for Conference, 1911.—Mr. Arrowsmith reported an invitation from the Halifax Committee to hold the Conference in Halifax in 1911. It was resolved that the invitation be accepted and that the cordial thanks of the Society be conveyed to the Halifax Society. It was further decided that arrangements for the Conference, such as the time of meeting, subject for discussion, invitation of lecturers, be referred to the General Secretaries to settle in conference with the Halifax Society.

Votes of Thanks.—It was resolved that the sincere thanks of the Society be accorded to the following for their assistance in promoting the successful meeting held at Tunbridge Wells :—(1) To Miss Watt for her energetic and arduous labours in organizing the Conference; (2) to Sir J. Crichton-Browne for his instructive and illuminating Address to the Conference; (3) to Mrs. Higgs, Sir J. Cockburn, and Mr. Russell for the lectures they delivered to the Conference; (4) to the Deputy Mayor, Mr. Councillor Cayley, for presiding at the opening meeting; (5) to Mrs. Weldon for receiving and entertaining the members; (6) to the Local Reception Committee, all hosts and hostesses, for the entertainment and hospitality extended to the Delegates; (7) to the Mayor and Corporation of Tunbridge Wells, and to the Tunbridge Wells Tradesmen's Association for the drive with which the meeting ended.

Condolence.—The Council desired to place on record their regret at the loss sustained by the Society in the death of the Right Hon. the Earl of Stamford, President of the London Society.

ABSTRACTS OF REPORTS FROM CONSTITUENT SOCIETIES.

Birmingham.—"The Society more than holds its own in point of numbers, despite the many and varied calls upon the time of its members, inevitable in a large city. There has also been an increase in the number of subscribers to the magazine. The meetings have been well reported in the local press. About one-sixth of our members are parents and 95 per cent. are teachers."—*Miss A. J. Dawes*, Hon. Sec.

Cheltenham.—"We began the session with a balance of £3 1*s.* 3½*d.*, and expect this last session we shall have slightly more, as we had a fair number of new members. Our total number of members is 164 at present, and of those, 46 are teachers, 32 student teachers, 18 parents, 9 doctors, and the rest do not come under the above headings. *Child-Study* is only taken by a few members. The progress in interest has been evident, and discussions at general and other meetings have been more animated."—*Miss M. A. Chevallier* and *Miss F. M. Baird*, Hon. Secs.

Dundee.—"Our finances are now satisfactory. We have wiped out the deficit with which we began the session, and shall start next year clear. We have now a membership of 60. The list of members may be classified as follows: parents 14, teachers (including 6 officers of the Training College) 47, members of School Board 5, doctor 1, H.M. Inspector of Schools 1, engineer 1."—*Mr. Robert Jackson*, Hon. Sec.

Edinburgh.—"The adoption of a definite scheme of work [see *Child-Study*, January, 1910, p. 125] has aroused considerable interest among our members, and is felt to be more in keeping with the nature and objects of the Child-Study Society than a programme of disconnected lectures. The audiences were, on the whole, good, and did not show nearly so much diminution towards the end of the session as last year. There are 91 (paid-up) members this session, of whom 57 take the

magazine. Of these 20 are parents, 63 are teachers (including several professors, lecturers, and inspectors), 8 are doctors, and 7 unclassified."—*Miss K. Scott-Moncrieff*, Hon. Sec.

Exeter.—"Useful work has been done during the past year, and interest in the Society's work has been well maintained. The circles for reading and discussion have continued their work, the subjects taken by Professor Forster being 'The Making of Character,' and that by Miss Fryer, 'How Best to win our Children.' During the summer two visits were made to the school for the feeble-minded at Starcross, by the kind invitation of Mr. E. W. Locke. The membership is 105. The treasurer reports receipts amounting to £19 1*s.* 10*d.*, with a balance in favour of the Society of £2 7*s.* 7*d.* Classification of members, 1910: teachers 66, parents 38, officials of the education authority 8, medical men 6, no occupation 5, H.M. Inspectors 2, wardens of hostels 2, clergy 1."—*Mrs. Jerman*, Hon. Sec.

Halifax.—"Another successful session's work. There are now 212 members in the Society. This total is composed of 53 parents and 159 teachers. Next session, in addition to eight lectures, a reading circle will probably be formed for the study of adolescence, and, as it is also proposed to invite the Conference to Halifax for 1911, the members are looking forward to a strenuous time."—*Messrs. W. Ratcliffe* and *J. Arrowsmith*, Hon. Secs.

Liverpool.—"The Society was fortunate in securing the services of Professor E. T. Campagnac (Professor of Education, Liverpool University) for the present year to fill the vacancy caused by the resignation of Dr. Damer Harrison, while Dr. Arkle's place as Joint Hon. Sec. was taken by Mr. C. W. Bailey of the Holt School. A large number of additions were made to the Council, including Mr. J. G. Legge (Director of Education), the Head Master of the Liverpool Collegiate School, Professor A. Mair (Professor of Philosophy, Liverpool University), Miss Wright, of the 'Linnerslie' Art Studio, and one or two members of the Liverpool Education Committee. The total number of members for the year is about 100—teachers 87, doctors 4, inspectors 2, parents 2, others 5."—*Miss Lowe* and *Mr. C. W. Bailey*, Hon. Secs.

London.—"Record continued progress and activity in promoting the advancing and development of the work of the Society. There has been a large accession of members and associate members, and an increase in the funds. During the year 29 members and 91 associate members were elected. The membership at the close of the year numbered 404. The statement of receipts and expenses shows a balance in hand of £56 6*s.* 10*d.* A *causerie* was arranged on February 11th to entertain the American teachers who were visiting this country, when 150 members and friends attended. The Society has again to thank Sir Francis and Lady Campbell for arranging for the members to visit the Royal Normal College on July 3rd, and for entertaining them at a garden party in the grounds of the college. 170 members [were present]."—*Sir Edward Brabrook*, Chairman of Council; *Mr. W. J. Durrie-Mulford*, Hon. Sec.

Manchester.—"The Conference held last year in Manchester, not only paid its way, but through the sale of tickets and a few donations (including the grant of £2 from the Child-Study Council) there remained a balance of £3 7*s.* The number of members has slightly increased, being now 218 as against 212 last year. Of these, 78 take the magazine *Child Life*, and 48 take *Child-Study*. These numbers are to be explained in that our Society is a joint society of the Child-Study and Frœbel Societies, and members of the latter society have always taken *Child Life*. The Frœbel Society also had a rule admitting members at a minimum fee of 1*s.* per year without subscription to a magazine, which accounts for the large number of members who have no magazine."—*Miss Elizabeth Needham*, Hon. Sec.

West Kent.—"This is rather a difficult session to report. For various reasons the lectures first arranged had to be given up [and others substituted]. At the end of last session there were 47 members—26 parents, 21 teachers, 8 medical men, 2 clergymen, 2 no occupation, parents and teachers 6, parents and medical men 6, parent and teacher and clergyman 1, parent and clergyman 1. Owing to the small audiences we have had, a general meeting was called in October to consider the desirability of continuing the West Kent Society as a separate entity; by a majority of 1—14 being present—it was decided to dissolve the West Kent Society after the Conference."—*Miss F. M. Watt*, Hon. Sec.

NOTES.

The Conference.—Our best thanks and heartiest congratulations are due to the Reception Committee for the excellent work its members did in making the Conference such a success. The situation was, in any case, a very difficult one, and it was made very much more so by the lamented death of King Edward VII. Yet all difficulties were overcome, and the Conference proved as profitable as pleasurable. Much hard work must have been done by all to secure this result. Certainly the Hon. Sec., Miss Watts, was unsparing and unflagging in her efforts, even to the extent of staying on in Tunbridge Wells for several weeks after she had made arrangements for leaving the town.

The reception, given by Mrs. Weldon, on Friday evening was a very great success, and a most enjoyable function. Unfortunately, owing to the shortened time, Miss Barker's invitation to the delegates to visit her Institution (St. Christopher's—for the study of child life) and take luncheon had to be foregone.

The Conference was well reported in the local papers, and received good notices in the large London dailies.

The Tunbridge Wells Child-Study Society.—The West Kent Child-Study Society has been reorganized under the foregoing title. A strong committee has been appointed, and Miss Kempthorne (28, Warwick Park, Tunbridge Wells) has undertaken the work of Hon. Sec. Over forty have promised to be members, and a reading circle has been formed. Miss Louch and Dr. Kingsford attended the preliminary meeting, which was held at the Town Hall, under the chairmanship of the Deputy Mayor, Mr. Alderman H. M. Caley. These happy results are mainly due to the devoted work of Miss Watt, and on the motion of Mr. Honeywill "warm thanks were conveyed to Miss F. M. Watt for her efforts to create interest in child-study."

The Dundee Society.—The successful year's work of this Society is largely due to the new Hon. Sec., Mr. Robert Jackson, who in spite of ill health has devoted himself to the work, and has helped forward the work of the Society in every way.

The Journal Committee.—Professor Forster, of University College, Exeter, has been co-opted by the Committee as one of its members.

Our Journal.—This number is enlarged to fifty-two pages. The Journal Committee hope that an enlarged circulation will enable them to repeat, and even increase, this enlargement. Hon. Secs. and members are asked to assist in every possible way in the realization of this hope.

We regret to announce that Mr. Mulford finds it necessary to give up his work as Editing Secretary. The Society owes him a great debt of gratitude for the work he has already done so successfully in the critical early stages of the life of the *Child-Study* Journal. We believe that we ought to include Mrs. Mulford also, in this

expression of our indebtedness, as an unofficial but most efficient helper. Mr. Holman has been requested by the Journal Committee, and has consented, to act as editor. His address is 8, Hornsey Lane, London, N.

Annual Reports.—The Journal Committee regret that it is impossible to print the report of each constituent society in full. They intend to make representations to the Council on the matter, and Hon. Secs. will doubtless hear more later on. The general idea is to have all the reports, in full, made up in pamphlet form, and written in such a way as to give a clear and complete idea of the work and progress of all the societies.

The Next Conference.—The subject selected, and the lecturers invited, for the next Annual Conference, at Halifax, will be made known as soon as the preliminary arrangements have been made.

Professor Karl Pearson's Investigation.—In accordance with a suggestion made at the secretaries' meeting at Tunbridge Wells, Professor Karl Pearson has been asked to draw up a simpler schedule of questions on "Nature and Nurture." His reply is that the former schedules are gradually being filled up, and he hopes, ultimately, to get enough filled in to work at. He writes that any further returns from the Child-Study Society will be welcome. As we are hoping that Professor Pearson will give us the results of his study in a lecture at the next Conference, we must once more appeal to our local secretaries to do their utmost to secure a considerable number of returns from their members.

Miss Ravenhill's Paper.—Many regrets were expressed by those at the Conference that Miss Ravenhill's paper on "Play Interests of English Children" had to be omitted because of the shortening of the time. We are glad to say that Miss Ravenhill has promised to read it to the London Society before her departure for Canada. All will deplore the loss to England in general, and child-study in particular, of Miss Ravenhill's departure to Canada, much as they will congratulate Canada, and wish Miss Ravenhill every success and happiness.

Professor and Mrs. Earl Barnes.—The Committee and others of the London Society entertained Professor and Mrs. Earl Barnes, who were staying in town for a few days, at dinner in the St. James' Restaurant on Thursday, June 30th. Warm tribute was paid to the very important work which Professor Earl Barnes has done for child-study in England by Sir Edward Brabrook, Miss Stevens, and Mr. Tibbey, in speaking to the toast of "Our Guests," and by Dr. Shuttleworth, Miss Ravenhill, and Dr. Langdon-Down in proposing "The Child-Study Society." Professor Earl Barnes, in reply, gave an inspiriting and eloquent address.

What we are asked to do.—"A widower with four sons aged 11, 9, 7, and 2½ years," asks our Hon. Sec. to get "them into an institution where they will be well cared for." We regret that this is not in our line. Another correspondent writes, on a postcard, to ask, "Is your Society to do with child-life in poor degraded districts, or is it educative only? Excuse inquiry, but we have 2300 children, poor and needy and sadly surrounded in our slum . . . district. Visit it late of a night if you want to see English childhood done to death." Again we deeply regret our limitations.

Reviews.—*We are compelled, by want of space, to hold over these till our next number.*

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IMPERFECTIONS IN PHYSICAL GROWTH AS HINDRANCES TO SOCIAL DEVELOPMENT.

By ALFRED A. MUMFORD, M.D., B.Sc., etc.
Medical Officer Manchester Grammar School.

A paper read before the Child-Study Society, Halifax, January 19, 1910.

By imperfection of physical growth, I understand the falling short of such bodily growth and development as is considered natural for the majority of human individuals when brought up under healthy conditions in a civilized community. In view of the fact that grave imperfection of growth often prevents an individual from attaining a proper social position, we speak of it as resulting in physical disability.

Few, if any, would claim that the possibilities of growth and attainment are the same for all, for it is common experience that quite as wide a range of powers as of opportunities exists.

Without there being any uniformity, however, certain limits can be, and generally are, set to possible variations, below which we do not claim that individuals have attained sufficient growth either in size or power to become, through the working years of life, full wage-earning and self-supporting members of the community. If any given individual falls so far short of his or her proper growth, or suffers from such a natural deprivation of his powers of sight, of hearing, of bodily growth, or deficiency of power of reason and self-direction and control, as to be unable to do this, we consider he or she is suffering from severe physical imperfection. By social development I understand the obtaining of a social status as a result of efforts put forth. Such efforts are an expression of physical powers, and the degree of the powers is largely determined by influences at work before birth and during the early years of life. If the efforts which one particular individual puts forth

are in considerable excess of the efforts put forth by his neighbours, there may be a very considerable rise or social advancement which, though occasionally spurious or adventitious, is more often related to the progressive development and display of various physical, mental, or moral powers. Apart from pecuniary or social advancement, intellectual and moral growth may be the most apparent form of social development, but it is still the result of efforts put forth by means of energy which exists within the individual.

Hindrances to physical growth, and consequently to social advancement, may, and do, occur at all ages. Powers once possessed may be lost. I desire to concern myself rather with the aspects of the case that present themselves during school life. Estimating the population of Great Britain as 35 millions, there are 4 or 5 millions under school age, and about 6 millions of school age—that is, between 6 and 14. Of these about 90 per cent. are getting their education free. Since the country has assumed the responsibility of providing the funds, it naturally should also accept the responsibility of examining from time to time whether such expenditure is sufficient, and whether it is properly incurred. If any considerable proportion of the children is unable to benefit by the education provided, certain questions soon present themselves and demand an answer. Let us start with the mentally defective children—that is, the special class of children who are not sufficiently imbecile to be incapable of learning anything whatever at school, but are a source of anxiety and trouble on account of backwardness, though quite able to learn to become wage earners of a certain grade. They are, however, incapacitated by defective brain development from working at the same rate and on the same terms of independence as their fellows, and in most cases unable to attain such degree of self-control and self-direction as to become useful and self-existing citizens when free. The report of the Commission on Feeble-Minded Children shows that when these children grow up to manhood and womanhood, they drift in large numbers into the prisons, the workhouses and the county asylums. They make up the large bulk of persons committed for trivial offences. Repeated punishment has no remedial effect. They have not the capacity to learn by experience. They are idle and shiftless casuals, and are a nuisance to all who have to deal with the unemployed; for by their inadequacy and inefficiency they render futile many useful measures. The numbers in which they exist is variously estimated by different investigators, according to the standards employed and the period of life at which the investigation is made. Most school authorities which cover a wide range of urban life, find at least 1 per cent. of the children who are attending ordinary city

schools are unable to profit by the education provided, or are by moral imperfections unsuitable to be left with their fellows without special supervision. They require special treatment, special schools. There is probably at least another 1 per cent. of the school age population of still lower grade of mental or bodily deficiency unable to attend-school at all. Something, therefore, between 1–3 per cent. of the children who should be attending public elementary schools are suffering from such mental deficiency due to imperfection of growth of brain that they are incapable of benefiting by the education provided. The existence of such a group or class of children in the school community, and in the larger world outside, opens up the following social questions: Is it worth while to train them? Would it not be better to let them sink uninterruptedly to their natural level and become extinct in the struggle for existence?

Before, however, finally committing ourselves to a possibly ineffective and may be cruel method of dealing with the matter, it would be well to ask ourselves why such children are present in the world at all? Are they the result of sin, drink, and debauchery, and is their affliction the penalty Nature exacts for such? If so, there might be some justification for leaving them to the stern execution provided by Fate.

A good deal of attention has lately been given to these children. When Nature scatters her gifts upon us she does not divide them with equal hands. Some recipients have more than their share, others less. Every now and then in the upper and in the middle class families, as well as among poorer class ones, certain children are born whose brains are of such imperfect formation that the child fails to develop perfectly normally. The arrow of life's vigour is shot, but it falls short of its full flight, however favourable wind and weather, which sped its journey, might have been. In some cases the cause is poor health or exhaustion of the mother anterior to child-birth; but in others there seem to be no available explanation except that it is a peculiarity of growth. In some cases an arrest of development at one stage is made up by increased growth at another, so that sufficient power is ultimately attained for the child to become a fairly normal man or woman.

Though the first appearance of such children is equally common in all classes of the community, yet the conditions of life in the middle and upper classes differ from those occurring among the labouring classes in such a way that in the first case a boy or girl whose mental deficiency is marked, fails to maintain his position, and also to secure a partner. The mental deficiency, therefore, which, in many of its forms, is capable of transmission by heredity, naturally ceases with the

individual and tends to be extinguished. With the casual labouring classes, however, so many forms of irregular employment are possible, so many opportunities of a parasitic or semiparasitic life, generally more or less associated with crime, exist, that mental deficiency in childhood and youthhood is no bar to mating. Offspring are brought into the world who inherit the mental deficiency of their parents, and so a condition of imperfect brain growth is perpetuated in the slums which tends to extinction in the middle classes. The student of national progress may detect a similar condition of affairs in regard to drunkenness. Formerly drunkenness was a national habit, prevalent among all sections and classes of the community. As life became more persistently strenuous, and social status less capable of being maintained by merely periodic outbursts of energy, more nerve control became needed for the daily affairs of life. Experience rapidly showed that drunkenness impaired social efficiency, so that it became increasingly viewed with disapproval. Those who indulged in it, especially when they showed other signs of defective control and determination, were unsuccessful in maintaining their social status and fell into strata below. They actually failed to secure partners, or perhaps it would be truer to say, often failed to secure the partners best capable of maintaining the higher level. Alcoholic excess thus became less and less prevalent among the middle classes. During the last ten to fifteen years it has also become less and less prevalent in the upper artisan classes, and to find a prevalence of drunkenness we have to go to the lowest strata of society, where there is no need for strenuous exertion. Existence in the slums is hard, but such exertions as are called for are of too short duration to be really strenuous.

The physical condition of the dwellers in the crowded parts of the large cities has been pressed on general attention as a consequence of the Public Elementary Education Act of 1870 and the subsequent additions thereto. The conscientious teacher, the hospital or dispensary doctor, and the poor law official find individuals of defective physical endowment pressing themselves on their attention in apparently increasing numbers. The task of reforming such individuals when adults is hopeless. Is there any chance of dealing with them successfully in childhood? Can they ever become really normal citizens?

From time to time one hears discussions as to which was the greatest age of the world's history. When did a particular nation achieve the zenith of its power, and subsequently begin to fade? Some urge that the Elizabethan age was the greatest in England's history and that the brilliant group of statesmen, actors, writers, sailors, and merchants that belonged to Shakespeare's time has never been equalled and will never

come again. Others travel a little further back, and dwell on the outburst of joy and energy that witnessed the rebirth of learning at the Renaissance, which opened out to a world, tired of violence and personal strife, the glories of ancient thought. Others point to the Victorian age with its conquest over the physical forces of nature and the subordination of these forces to man's requirements.

Personally I think a case might well be made out for the age that is before us, and on the shores of which we are now standing, in that it offers opportunities that have never been offered before for social reconstruction, and for an application of known biological laws concerning bodily and mental growth, which, if applied properly, may lead to such a realization of a healthy mind in a healthy body as have never been understood before.

We may be the more inclined to consider the possibilities in this direction, when we remember how frequently the doctrine of Natural Selection is being invoked as a basis for political action, though one might hesitate to assent to its application in the bald way most generally urged. If by Natural Selection we mean the play of natural forces of growth and struggle over which man has no control, then man has already prejudiced the appeal by allowing to be set up in the cities an absolutely unnatural set of circumstances, under which normal growth cannot take place. The deprivation of sunshine and of fresh air, the setting up of artificial methods of temptation, the stimulation of gross and evil habits of drunkenness and vice, the virtual withdrawal of fair and free opportunities for obtaining food, are all inimical to healthy growth. Under these conditions only a debased and a degraded race can exist and multiply.

The Natural Selection of the Forest and the Prairie has certainly something in its favour, for it stimulated growth and effort, but the Natural Selection of the Slum has nothing good about it. It arrests all healthy growth and only allows the survival of those who can exist under unhealthy conditions. Man has made the evil conditions, and they will exist till man removes them. When he removes them, or as he removes them, the conditions which favour the persistence and the prevalence of the mentally deficient, the criminal and the alcoholic, will no longer exist, and a more fitting Struggle for Existence with the survival of finer types will take its place. The trend of recent knowledge is very distinctly in the direction of showing how the present conditions are both depressing healthy growth in the individual and are favouring the survival of a type with poor energizing power.

The first note of dissatisfaction with the present condition of things as regards the growth of children and their preparation of obtaining

a social status, was sounded by the Royal Commission which was appointed in March, 1902, to inquire into the opportunities for physical training which were available in the state-aided schools and other educational institutions in Scotland. The Commission made special inquiries into existing physical conditions of a number of children in Edinburgh and Aberdeen, and in their report, published March, 1903, commented on the adverse conditions under which a large number of city children were growing up. They especially urged the need of some form of medical inspection, mainly for the purpose of remedying existing disease and defect, but they also urged that it would result in obtaining more accurate knowledge of existing conditions, and enable proper steps to be taken to improve national physique and to retard such degeneration as was in progress. The report of the Scottish Commission was not allowed to sink into oblivion. Several English Governmental Departments were instructed, September, 1903, to hold a joint inquiry into the alleged national degeneration, primarily, it is true, with a view to determining why there was such a large proportion of rejections of candidates for the army, but also with a view to finding out in what way the medical profession might best be consulted on the subject. The results of the inquiry were published, 1904, as the Report of the Interdepartmental Committee on Physical Deterioration. It discussed the reason for the large number of rejections of intending recruits, but gave most of its attention to the causes and indications of degeneracy occurring in particular classes. After discussing the increased growth of city life and the diminution of country life, the Committee turned its attention to school life, and here found causes actually at work which should be at once stopped.

Dr. Leslie Mackenzie, the Medical Inspector to the Local Government Board in Scotland, who, in 1902, had made some important investigations into the physical development of groups of children in Edinburgh, for the benefit of the Scottish Commission, has since extended his researches to Glasgow, and in 1907 published the most complete analysis of the exact relation of home conditions to growth and to mental development that has hitherto appeared. He showed that the less the room available for the family the greater the interferance with proper growth. Children brought up under bad conditions of poverty, insufficient food, imperfect clothing, fell short of their proper growth in height and weight to an alarming extent, and were attaining manhood and womanhood, quite insufficiently supplied with power and energy to obtain proper social status.

It may be argued that such children never would and never could attain the stature and growth of the most favoured section of the

community. This is but part of the truth; the evidence is overwhelming that when these children are for a time removed to better conditions, very considerable increase of growth is attained, and the real difficulty is that such removals can be only very partial and very temporary. They partake of the nature of experiment. The children when they return to their evil environment speedily relapse to the lower level of growth.

The figures given by Dr. Mackenzie show how great is the loss of height and weight due to adverse conditions of home. The more densely packed the home, the less the fresh air and stimulus for growth, and, no doubt closely allied, the less the food supply, the clothing, and the amount of rest for recovery from the fatigues of the day.

Loss of Lbs. in Weight according to Size of Tenement.

Ages		7	8	9	10	11	12	13	14
Group I., below average of whole country in lbs.	3·1	4·0	6·6	6·7	8·5	9·4	13·2	16·0	21·3
Group II.	2·3	3·7	6·0	5·0	7·5	9·0	13·0	15·0	20·0
Group III.	1·4	1·1	2·6	2·0	3·2	4·6	6·6	11·2	10·5

Loss of Inches in Height.

Ages	6	7	8	9	10	11	12	13	14
Group I.	2·2	2·0	2·5	2·8	3·3	3·5	4·3	4·2	4·7
Group II.	1·6	1·8	2·1	2·1	2·7	2·7	3·5	3·6	4·1
Group III.	0·1	0·3	0·3	0·6	0·6	0·8	2·4	1·8	2·7

Group I. comprise single-room tenement; Group II. comprise two-roomed tenement; Group III. comprise three or more roomed tenement.

Now, the children represented by these figures constitute a much larger proportion of school children than do the mentally defective. If these children were physically defective entirely by defect of *hereditary* endowment, and were incapable of being made into anything better, then indeed the condition of affairs would be disheartening. But if they are physically defective owing in part to the depressing influence of environment on their growth, but are still capable of an adequate physical growth under proper conditions, then some further social reconstruction becomes a National necessity.

Recent investigation into heredity seems at times to separate innate power of growth from outward circumstances too violently. Such a separation is only helpful to a certain extent. It may readily become

misleading. All growth is dependent upon certain outward conditions, and if these do not prevail, growth is arrested. Under given conditions we may breed continuously a certain race of vigorous men and women, but when we remove those conditions, however good the stock, the vigour of the race dwindles. Growth is the result of the stimulation of certain innate powers by outward circumstances; without the stimulus, growth takes other directions. The only growth allowed by the slum is a debased growth. Whatever vigour of life still remains will often perforce seek anti-social channels. Probably to the other agencies which impair growth of body and self-control in the slum must be added loss of sleep. The incessant stimulation of life with hardly any periods of cessation, results in a wear and tear of nerve energy, and a dissipation of vital strength, which lowers the power of resistance to disease. This, combined with the lack of the proper stimulants to growth—sunlight and oxygen—results in an impairment of growth which is threatening National stability. The shortage of food must also be a contributory factor, though it is impossible to trace its precise effect.

Four-fifths of the intake of food of a normal individual is required for heating the body, and the remaining one-fifth is divided between the energy needed for growth, and that expended in bodily activity, and in repair of tissues already undergoing active wear and tear. If we place the growing child on short rations, the supply of energy is correspondingly diminished, and perhaps the bodily growth is the element which suffers most of all.

It seems almost unnecessary at the present day to insist on the close relation between the development of the bodily and that of the mental powers. One illustration may, however, be given from the Report of the Interdepartmental Committee on Medical Inspection and Feeding of Children attending Elementary Schools published in 1905.

Dr. Ritchie examined some 470 children, who, instead of being in the standard proper to their age, were at least two years behind it. Of these, 325 exhibited marks of bad health and nutrition; 158 showed enlarged lymphatic glands (which if not already invaded by tubercle, were preparing a soil in which tubercle could readily appear, and which certainly betrayed the ravages of some infective and depressing agency); 201 had bad teeth; 130 were indifferently clothed. The loss of school attainment was thus certainly due to preventible bodily cause, for only 79 showed defective eyes, 67 ear disease, and 14 were mentally deficient. These figures show, I think, unmistakably the operation of preventible conditions.

The above-mentioned Interdepartmental Report resulted in the

Education Administration Act of 1907, and medical inspection of school children became the order of the day. It began to take effect January, 1908. We have had now two years' experience of the working of what was at first a very hastily arranged piece of legislation. Yet those who helped to pass the Act builded perhaps better than they knew. A flood of light has been shed on many dark places, and though the result has been a revealing of much that is horrible and debased, we are considerably nearer understanding the forces at work, and no longer vaguely alarmed without understanding.

Among the twelve tasks which it was supposed would have been too much for Hercules was the cleansing of the stables of Augeas, where there was the accumulated filth of 3000 oxen during thirty years. The method Hercules adopted was one which commends itself very strongly to modern scientific medical knowledge. He directed a powerful stream of clean water from the neighbouring rivers of Alpheus and Peneus, and the force of the combined streams speedily and successfully accomplished the task. Can we sufficiently direct the forces of sanitation, and the example of right living on to the Augean stable of modern city slums? We may not, and we probably shall not, greatly affect the characters and the strength of the adult members where evil habits have taken deep root. Yet much may be done to prevent the children growing up as their parents have done.

This it seems to me is the real work of Public Elementary Education. Beginning as it did with the idea of providing every child with a smattering of knowledge, State interference soon found that it had a much larger task before it. Many children were actually injured by the efforts which were intended to benefit them. The plague spots, which had been unknown or unheeded before, now became revealed. The growing sense of social responsibility, together with the increasing tension of International struggle, have been sufficient to make us realize that much more than mere instruction must be attempted.

Simultaneously with the realization of the debased condition of the children of the slums, another spectre has appeared which seems even more fundamentally to threaten our national vigour. It is realized that increased social welfare and the diversion of personal interests into self-satisfying channels, though it does much for the individual, makes little provision for posterity. There is in every country of Europe a very serious falling off in the birth rate, and this affects most strongly the intellectual and the middle classes, and is rapidly extending to the better artisan classes. The impoverished, the weak, and the dissipated alone seem to have large families. If all who are born, grew up to maturity, the slum would very rapidly outnumber

the population above it, and by leading a parasitic life upon it would make such demands on its energies and activities as would absorb the power it needs for its own sustenance and growth. We speak of the appalling death of infancy, and we do what we can to check it. Yet that appalling death rate is the means which Nature has provided to save us from the full penalty of our national folly in allowing the slums to grow up. By its means the lowly organized slum population is kept somewhat within numerical bounds. Fresh light has been shed upon these problems by the researches of Sir Francis Galton and by Professor Karl Pearson on the comparative influence of heredity and circumstance. The exact interpretation of these investigations is not altogether clear, and there is danger in hasty conclusions being drawn before all the facts of the case are fully before us.

Throughout the animal world offspring are most numerous where destruction of offspring is most rife. Fish have millions of eggs because millions will be destroyed. It is only when reproduction occurs by millions that the permanence of the race is secured. Elephants have few young, for destruction of the young is rare. Eagles, too, whose eaglets are placed in situations largely free from danger, have few eggs in the nest. Just so many adults will be required as will fill the place of those who disappear by age or destruction. The struggle for existence is maintained by there being always a somewhat larger number produced than are required to fill the place of the previous generation. If the number is greatly in excess, the struggle will be very keen. The preservation of life, and the prolongation of working days among the middle classes, combined with the entry of women into the economic struggle, have reached such a level that there are fewer vacancies to be supplied by the children as they emerge from childhood. The pressure of the struggle for existence, though not too keen for those who have only limited pecuniary responsibilities, has become increasingly heavy on those who have families to support. As a consequence of both factors, children appear in lessened numbers in the middle classes than where children sooner became wage earners. Their maintenance in childhood, and their preparation for life, makes a heavier call on the self-effacement of parents, and only those with very strongly ingrained parental instincts are likely to accept the social sacrifice that the rearing of a family entails. There is a rightful limitation of family in accordance with opportunities for proper upbringing. In a highly civilized community such limitation may be an expression of self-control, and not of selfishness. If, however, it is the result of self-indulgence and the pursuit of self-interest, it soon

secures its own extinction. Though money or possession may be retained, the family in which self-interest prevails tends to become extinct. At the present time it is difficult to separate the effect of these two causes,—self-interest and self-control is the limitation of numbers in the family, for they produce superficially similar results. The limitation of the former is often a permanent one, and the limitation in the latter is often a temporary one. There are many, perhaps the majority of the community, who exhibit self-regard in excess, and take life for the opportunities it presents for personal advancement and the pursuit of personal pleasures; the very efforts they make are helping to secure that, as far as their actions are the expression of hereditary tendencies, the qualities they manifest shall tend to disappear from the community by the extinction of their stock. There are also many others in the community, and I believe that these occur in increasing numbers, who take the obligation of parentage as one of the highest social privileges, and not at all too dearly purchased by the prospect of the surrender of social advancement. But social advancement is not always denied to them, for the very efforts hard-working parents are compelled to put forth to support those dependent upon them, often secures higher economic prizes than they might have secured had circumstances allowed them greater leisure and made less demands upon their exertions. Whether such occurs or not, I believe a great deal of the increased humanity and sympathy of the present day is due to the persistence of family stock where such virtues are common, and the natural extinction of some stocks in which the self-effacing virtues were more rare. Perhaps a good deal of commercial selfishness that we see around us is already finding a natural check in this way, and that so much of the Individualism of the past as represented an element of selfishness is doomed to diminution or extinction before such element of present-day Socialism as represents a consideration for the welfare of others. When the community finds itself face to face with a real shortage of child-life, when there are places to fill but a lack of vigorous and capable young life to fill them, steps will no doubt be taken to ease the burdens of parentage. This is already being done to some extent by the extension of bursaries to schools, and by the suggested rebates on the income tax according to the number of children under sixteen. I am inclined to think that an indirect but by no means inconsiderable effect of the old-age pensions will be the subsidizing of families where care of parents and sympathy for others is ingrained, and where there is sufficient stock of vitality to secure its older members achieving the longer term of life. There are at present no means of knowing who are the actual

recipients of these pensions; but the considerable proportion certainly go to the struggling middle class families who desire to keep their old people among them, and yet find even the readily satisfied wants of old age are an addition to the family burden. The prevalence of Child-study associations, the gatherings of parents and teachers, and the general increased earnestness in bringing up children is a testimony to the increased worth of the child in the middle classes and to the upper working classes. There have always been a few conscientious parents, but we have only to look back a generation to realize how little the future welfare of children was regarded by most of those who had undertaken the responsibilities of parentage with a very light heart.

How is it, then, if there is an increased attention to the up-bringing of children, there are so many ill-regulated and uncontrolled and undisciplined children of the middle class, as well as among the lower classes? Does not this fact of itself imply a loss of power in family life?

Rigidity of restraint upon childhood has been withdrawn; new opportunities for freedom are opening out on every hand. Freedom has degenerated into license because the real principles of training and self-government have been ingrained neither in the parent nor in the schools. These are only now beginning to be part of the duties of education. We are in an intermediate period, when artificial external restraints have been withdrawn, and internal self-restraint has not been inculcated.

There is also one other very potent reason. Imperfection in physical growth and development affects the mental and moral qualities as well as the bodily ones. Social and family instincts are the latest to appear in a civilized community, and are among the first to suffer denudation in any artificial interference with growth. Consequently both by racial inheritance and by custom, as far as they exist at all, they are at a lower level in the slums than in the homes of classes just above them.

A very powerful denuding force that is very prevalent is the universal presence of disease in the poorer dwellings of a city. Acute infectious disease claims its thousands of victims, but the less acute and still more devastating influence of the tubercle bacillus injures its tens of thousands. Many of those children who have not already died seem to be to some extent immune or protected against the rapid action of the disease of tuberculosis. They have, however, been wounded and damaged, though not killed. They are left to struggle through childhood and early adolescence with impaired frames, and in many cases to finally succumb in early manhood or womanhood.

National elementary education has made a beginning as a State effort to do something to train the future citizen, but in far too many cases the

work is wasted because it is too soon abandoned. Between 12 and 14 years of age there are about 1,300,000 boys and girls in England and Wales who should be under strict supervision in school, but of these, 210,000 have already obtained exemption on one plea or another. One would have thought that the age of 14 years was itself far too early for all supervision to be removed, yet in one-sixth of the cases we allow even the scanty supervision of school to be withdrawn. A National system of compulsory work and discipline will probably soon be needed up to the age of 16 or 18, which may embrace many forms of apprenticeship, or devotion to particular kinds of work, or compulsory training in domestic acts for many girls, till a fuller growth has been secured. We must recognize that the "family influence" has failed to secure proper development, and without proper development we cannot have proper citizens. Some measure of State supervision or State influence must be invoked if the community is not to perish. Only let us be wise and combine law with freedom, control with self-development.

It is in this direction that the Committee appointed by the Board of Education on the use and need for Continuation Schools has reported. They recommend supervision by school authorities up to the age of 16. Things move quickly nowadays, as was evidenced in the appointment of medical inspection of schools long before the Department of Education was ready with any plan. We may find ourselves marching more quickly than certain people think desirable. The Anglo-Saxon race has achieved its predominance, not by deep wisdom and foresight, but by readiness to adapt itself to new conditions, and the will to surmount difficulties as they arose. The new difficulties and dangers are at our doors. We know some of the means by which to meet and overcome them. Have we the will and determination to do so still left in us, or shall we shirk the task and suffer gradually failure and decay?

We cannot control all circumstances. We can only control where we know. We know some of the causes which oppose natural vigour and growth, both of character and of body. We know also that enlightened conditions mean an enlightened struggle, that the fittest to survive in the absence of sunlight and fresh air are beetles and parasites. When fresh air and sunlight appear, more vigorous and more highly organized forms of life will appear, struggle, and survive.

A nation is as great as the people who comprise it are strong and vigorous and determined. If the people fail in strength of purpose, in vigour of mind and body, in enterprize and in character, through lack of opportunity in the period of their development, then, however well-established and well governed the nation may be, however well

protected by Dreadnoughts and fortresses and torpedoes, it can never for long hold its own. It will inevitably decay from within in proportion as the manhood has gone out of its people. The salvation of the nation from the national deterioration that accompanies the dissipation of energy and strength in town and city life depends upon the schools. These are fast becoming centres for the diffusion of knowledge of hygiene and well-being. In them the early onset of disease can be, and often is, detected long before its ravages have been so extensive that return to health is impossible. It is also the observation point whence one can study the degree of interference with growth and development. It is the point where responsibility for the supervision and discipline of the child can be laid. Tubercle and rickets should be readily detected here and reported to proper authorities. Poverty of home and defective feeding can be brought home to parent through its officers. Defect of growth can be detected here; deafness, where due to negligence or chronic inflammation, could often be prevented here. Here we control circumstances, and here we see Hygeia's laws first ignored and outraged. Here at least we should endeavour to see that they are listened to and obeyed. Here hereditary laws can be recognized and studied. Where they exist as tendencies, they can be modified; and where they exist in sufficient strength to constitute unavoidable fate, they can be met with such wisdom as experience directs.

Above all, we must not violently divorce the outward circumstances which constitute the "environment" from the human beings which grow. The relations between the two are so complex, so intimate, so far-reaching that a too exclusive gaze on either may gravely impair our judgment, and lead us away from, rather than towards, enlightened action.

CHILDREN AND CINEMATOGRAPHS.

By H. HOLMAN, M.A.

The extraordinary success of cinematograph entertainments, as a business affair, is not so surprising as it may at first sight appear, when one considers the very low prices charged for admission, the comfort and attraction of many of the buildings, the convenience of going in and coming out at any moment of many hours of continuous performance, the possibility (in many cases) of seeing the whole programme twice over, the giving of free afternoon tea, and the almost universal delight in seeing pictures and dramatic representations. As to whether this form of entertainment is likely to become a permanent institution, or whether it is only a passing craze, there is hardly sufficient evidence, at present, upon which to base a confident judgment. For the moment there is a feverish activity amongst caterers for public amusement to supply more and more of such shows. In large towns one may find two or three cinematograph places within a stone's throw of each other.

Only one aspect of what is considered by some to be the evil influence of these entertainments has, so far as I am aware, received serious public attention; and this concerns the question of Sunday performances. Even this does not appear to rest upon the merits or demerits of the shows, as such, but merely upon the question of their evil as Sunday trading, and as a counter-attraction to church-going. In London the cinematograph people are out-flanking this attack by, at any rate nominally, devoting some of the proceeds to benevolent institutions, under whose public patronage the performances are advertised.

Now, these aspects of the question do not concern child-study societies, except in so far as they show how little the conscience and intelligence, in many places, are alive to the often serious and vital elements of social movements, while fully alert in pursuing financial gains or raising religious objections to Sunday trading. The purpose of this article is to suggest that there are serious and vital elements, at least in as far as children are concerned, in this recent development in social life; and that child-study societies may discharge

a public duty and confer a public benefit by studying the question and publishing the results.

It is suggested that this subject should be investigated under the following heads :—

I. *What Good Educational Use can be made of the Cinematograph.*—This is submitted as the first item, because it is well to be sure what good can be obtained from anything even before considering what evils arise from it. We seek the good things of life, and only avoid the evil. A considerable amount of journalese, *i.e.* present craze-patronizing, uninformed-idea-propagating, advertisement-advertising, and newspaper-filling matter, has been written in praise of the cinematograph as a means of education. Indeed, journalists have not hesitated to declare that it is an epoch-making, revolution-causing instrument. But we know our journalists, and need not—with all respect for them—take them seriously. What we really need to know is how the educationist and the educator view the matter.

The attention-compelling force of representations of active life—dramatic incidents, stories, and plays—goes without saying. The overwhelming appeal to the child's delight in moving things, and the often-added element of colour, are irresistible attractions to the young. The novelty, variety, contrast, play elements, constructive happenings, etc., which appear in cinematograph shows are all charms wherewith to conjure youth. There is also the constant stimulation of curiosity, in the most intense and rapid forms, as to what will happen next. Above all, there is the intense power of suggestion, which is particularly active in dramatic action, and which may move children to the loftiest moral virtues or the lowest vices—especially the latter, for the animal and brute in man is most easily aroused, while the good things of civilized life are as hard to keep as they have been to secure. But while each and all of these go to the making of the best possible conditions for true education, they also go to the disastrous destruction of true education. They may set up a habit of the mere luxurious laziness of passive attention ; an excitement and exercise of the lowest elements of character ; a debauch of exciting receptivity on the part of the child ; and the creation of an indisposition for, and active resistance of, that self-effort and constructive activity which are the corner stones of the real educative process.

We must, therefore, determine what are the conditions under which we may obtain the educational advantages, and avoid the dangers of the cinematograph as a piece of educational machinery. We must answer such questions as, Are the advantages more likely to be secured in a school and under the influence of a skilled teacher? Are the evils

likely to be most realized in a public entertainment, where little or no control or guidance is exercised? Is there not need for insisting that children's minds should be properly prepared for what they will see, so that they may get the fullest profit from it? Ought not steps to be taken for securing the active and critical exercise of the children's observing, retaining, and judging powers, and should not the results be afterwards tested?

For the imparting of information—a subordinate educational function—the cinematograph is undoubtedly of very high value. One can sometimes see pictures which set forth the incidents of, *e.g.* lumbering, colonial farm life, bird life, manufacturing processes, alpine climbing, foreign travel, historical pageants, etc., with great vividness and accuracy—though sometimes very foolish caricatures are given for the purpose of making up impossible tragedies or farces. Much good must result from such informational series of pictures, when they are strictly natural and accurate; but even in respect of such, much more educational profit will result when they are properly correlated with the previous knowledge and present studies of the children by teachers who best know how to do this, and how to get the most and best out of the actual working of the affair.

If the above be true, it is clear that whatever educational good is to be obtained from the cinematograph is most likely to be got by trained teachers and in schools; while it is least likely to be secured at public performances. Both parents and teachers, therefore, will do well to set their minds against any easy acceptance of public performances as a cheap and helpful means of education, even where the topics dealt with are suitable. But it is just this question of the topics dealt with in public entertainments that presents the most grave and serious issue, and we will now briefly consider this.

II. *The Moral Dangers of the Present Type of Subjects dealt with at Cinematograph Exhibitions.*—Any one who has attended cinematograph shows will at once recall foolish and silly pictures which had better have been omitted, and they will have been fortunate in their experiences if they cannot recall instances of series which were in every way, and in the most serious senses, highly objectionable and pernicious.

It is, to say the least of it, undesirable that children—whose unformed judgment, crude instincts, and keen imitative susceptibilities, render them easy victims to foolish and dangerous practical mimicry—should constantly see gross examples of the most absurd and dangerous horseplay jokes (?) in which babies, furniture, animals, etc., are subjected to madly outrageous treatment. The fact that most of this is, to adults

and the more intelligent boys and girls, obviously faked, does not make the thing, as a whole, any less desirable or less dangerous in its tendency. The fact, also, that men and women in the senseless pursuing crowds, which generally conclude such incidents, manage to fall in decidedly indecent ways, increases the reasonable objections to such incidents being shown to children. Such exhibitions are, in the highest sense of the word, immoral, since they directly suggest, and hold up as sources of amusement, the worst of social bad manners. Only in the crudest and most primitive way can they be said to be really funny or witty, while they are highly vulgar and often improper.

A far more serious form of evil is involved in such series of pictures as the following: a girl of about twelve years of age is left in a room to do her lessons. Mother goes out of doors, and father sits in an adjoining room, reading newspaper. Girl throws book down on the floor (making grossly exaggerated and ugly facial contortions), indulges in violent tom-boy antics, plays with a football which she throws through a glass door, and "makes hay" of some furniture. Father hears and comes to the room; girl makes clownish pretence of playing the piano; she lies emphatically and extensively when challenged by father; father is ultra-theatrically paternal in reproving her; girl takes up book again, making grimaces to the audience. Father retires to his room; maid enters with note; father takes liberties with maid (chucks her under the chin, tries to take a kiss, etc.). Daughter plays more ridiculous pranks; father goes and upbraids her, she lies again, and he spanks her (a vulgar proceeding). Father arranges a mirror so that he can spy on his daughter; she behaves insanely again; father enters, more lies, etc., and father points to mirror as evidence; girl makes absurd pretence of weeping, and resumes her book. Father goes to his room; maid enters; father takes liberties again, and maid becomes consenting party. Daughter discovers the proceedings through the mirror, enters, catches them kissing, and accuses them. They lie profusely, but she points to mirror. Mother returns home at this point; father bribes girl with money, not to tell—while mother can see everything that happens between them, but pretends not to do so—then praises daughter to mother for good behaviour. The exaggerated antics, grimaces, etc., are unspeakably silly and vulgar throughout.

A greater amount of vulgarity and immorality could hardly be compassed in the time and incidents. To shut ones eyes to the serious evil of such exhibitions upon the minds and morals of young people is in itself gravely immoral. If children's natures are as susceptible and plastic as we believe them to be, and if the environment is as powerful

as we say that it is, then the inevitable reactions to such impressions must do wholly evil work in fashioning the ideas and characters of the young.

There is still the improper and indecent series of incidents to be considered, of which the following is a specimen: a lodging-house by the seaside, with man attendant; single young woman appears, arranges to take a room, tips the attendant and walks in. Next, man and wife come and engage a room, she (obviously a man, dressed as a woman, to do rough and tumble business later) goes in, and he leaves her at the door. Attendant does usual silly begging for tip, with open hand held out behind; man refuses to give tip, there is a scuffle and the attendant is kicked down some steps; attendant goes through vulgar pantomime as to his injuries, then taps his head (sign of intelligent thought!) and proceeds to interchange the numbers on the doors of the married and single women, and then does more vulgar pantomime. Next is seen the single young woman in her bedroom; she begins to undress. Loud laughter from the audience (especially the children's shrill voices are heard), and very suggestive screams of delight from unrestrained individuals. When young woman arrives at last garments she grins and winks at the audience, and jumps into bed. Then the husband returns; pretends to be drunk, and does the usual tumbling which only a sober man could do; goes to right door, looks at number, and then goes to wrong door and enters. Next he is seen in the bedroom of the single young woman; he begins to undress (laughter and screams from audience); at critical moment young woman acts as though waking up, screams, and throws things at the man; his wife (in night-dress) appears; the two women struggle; then the wife hustles the man away, with vulgar violence.

One can understand that young men and women of a certain age and type may like this sort of thing, and, in the obscurity of a darkened hall, indulge in an enjoyment of it which even they would not otherwise think of allowing themselves; but for big boys and girls and young children, such exhibitions should surely be held, by all decent people, to be intolerable. As a matter of fact they will be found to be fairly common. Of the various degrees of such objectionable types, and of morbid sick-bed scenes, gruesome deaths, killings, horrible suicides, thieving exploits, executions, bull-fights, prize-fights, harrowing sufferings, and the like, we need only say that such are bad enough when shown to adults; whilst needlessly to darken and corrupt, what should be the sunny brightness of innocent youth, with them, is to commit a crime against humanity.

In *The Pedagogical Seminary* for June, 1910, there is this account of

the results of a committee of investigation: "The committee examined 290 different films, and saw fit to condemn 40 per cent. of them as objectionable. The objectionable features, in the order of prevalence, were as follows:—

Stealing, 13·4 per cent.
Murder, 13·1 per cent.
Drunkenness, 13·1 per cent.
Indecent suggestions, 8·2 per cent.
House-breaking, 7·2 per cent.
Loose ideals of marriage, 6·5 per cent.
Domestic infidelity, 5·8 per cent.
Vicious mischief, 5·8 per cent.
Suicide, 3 films.
Kidnapping, 2 films.

Here is a motley array of subject-matter calculated to appeal to the baser elements in human nature!" No illustrative incidents are given to show exactly what is included under the various terms; but most of them are self-explanatory, and the meaning of the others not difficult to guess.

When we remember that impressions inevitably tend to expressions, unless definitely inhibited; that what we like we are likely to do; that keen and concentrated attention sets up strong tendencies; that vivid thoughts lead to forcible actions; and that example invites imitation—in short, that action determines reaction, and that they are part and parcel of the total circuit of an experience—we must realize how vital are the issues with which we are dealing. To give an extreme instance, by way of example. In the London daily newspapers for September 14, 1910, is told the story of a warehouseman who committed suicide by throwing himself under a train, in the same way and at the same station as his employer had done two years before; also of a young cabinet-maker who killed himself by taking the same kind of poison, while standing at the same spot, as his brother had done two months previously. This is what is known as auto-suggestion, and is by no means uncommon. This kind of influence is ever at work in human beings, and unless there is sufficient will-power—based upon, and directed by, a dominating set of ideas—to inhibit this passing from example to imitation, a form of action and re-action, it is liable to take place in the most disastrous ways.

III. *Actual Results arising from the Influence of Cinematograph Shows.*—In dealing with this point I am again indebted to the article in *The Pedagogical Seminary* by Dr. J. E. Wallace Wallin, of the Normal Training School, Cleveland, Ohio. He asked sixty-three women, ranging from 17 to 21 years of age, in an elementary class in psychology in a teachers' training school, to write answers to the question, "Have you ever seen, heard, or read about children and adults *acting out* the ideas or suggestions conveyed to them by moving pictures?" He says that "twenty-nine of the replies were negative, eight doubtful, while all the

others reported instances where they had personally observed or learned through report that the suggestion had resulted in the performance of the acts which were pictured. Seven of these related to the playing of jokes and pranks, five led to acts of stealing, four to a desire to do as the picture actors did, and two to fighting."

A few examples of the actual replies are: "Pictures with a good moral leave me with a desire for a time to act in accordance with the moral. I saw a picture depicting self-sacrifice, and for a time I did the unpleasant duties more willingly. Rather than allow my little sister to fail in arithmetic the next day I sacrificed my interest to hers, and accordingly I 'flunked' [failed] in general method the next day. This came near spoiling the good effects of the picture show." "Once I saw a picture called 'circumstantial evidence,' in which a boy, to make his mother angry, smeared jam on a cat's paws, and put hairs from a blonde lady on his father's coat. When I came home I immediately did the same thing to my father's coat, with the result that the same unfortunate thing happened to me as to the boy in the picture." "Two little girls had seen in a picture how a woman taught a little girl to steal. Later they went into a store and stole articles, and were caught. They confessed that they had received their cues in a picture show." "A girl saw in a picture show how a girl ran away from home. This induced her to run away also. When found she explained that the idea had occurred to her from seeing a picture in which a girl ran away, and in which everything turned out all right." "A boy about ten years of age saw a picture of a boy of his own age fighting his big brother. Now he is always looking for a fight with his older brother. He tries to trip him as he saw the boy tripped in the picture."

While there are many more such extracts in Dr. Wallin's article the above are sufficient for our purpose; and they at least show that we cannot afford to ignore such issues. Too many parents and teachers still seem to expect that while Bible stories and moral stories will train in virtue, that stories of fighting, robbery, malice, lying, etc., will either "do the children no harm," or teach the opposite virtue—as though the action of black would get the reaction of white. The above facts ought certainly to convince us that as we sow so we shall reap; and that there is more than enough to do in early years in building up such a sound and strong body of moral and true (scientific, etc.) ideas as will resist and repel immoral and untrue ones.

IV. *Some Physical Evils of Cinematograph Exhibitions.*—Dr. Wallin asked the same sixty-three young women students "to state in writing the effects which they had noticed moving pictures have upon their

feelings, dispositions, and health." They were particularly urged to avoid anything in the way of exaggeration, and to remain strictly true to fact. "More than half of the girls (or thirty-seven) stated that watching the moving pictures induced headache. The eyes were mentioned fifty times, fatigue or strain of the eyes being mentioned eighteen times, pain in the eyes seventeen times, and blurring fifteen times. A 'tired or drowsy feeling' was induced in twelve cases, dizziness in nine, nervousness in nine, 'feeling cross' in four, a feeling of disgust in three, and the following were mentioned once each: an impairment of the memory afterwards, a 'queer mood,' a feeling as of 'walking on air,' and a 'dreamy, adventurous frame of mind.' Exciting or unpleasant scenes were the usual causes of the nervous strain. Eight ascribed their headaches to the overheated or exhausted air, nine to the motion of the pictures, eight to eye strain, and one to the brightness of the pictures. Five suffered headache only when sitting near the screen, one only when the movement was rapid, and three when the pictures were shown continuously. . . .

"Curiously only four of the answers were negative; so that practically in every case attendance upon ordinary moving picture theatre produced some unpleasant bodily effect. Eight [of these students] had attended [cinematograph shows] about once a week during the summer, five were attending about once a week at the time, seven once or twice a month, while fifteen had attended less than six times during their lifetime. Many did not care to attend them because of the headaches or eye-strain, or because of the trivial, disgusting, silly, unnatural or exaggerated character of the subject-matter, which was 'neither funny nor interesting, but silly stuff.'"

Though most of the new buildings for cinematograph exhibitions are in many ways exceedingly well built and comfortably appointed, even with them the question of constant and complete ventilation is a very serious one. Some of these buildings are opened from 2 p.m. till 11 p.m. every day of the week, and are crowded during the greater part of the time. In old and adapted buildings the conditions are often as bad as they can possibly be, and the harm done, by the bad atmosphere in them, must be great and often grave. The frequent and general yawns, and one's own feeling of drowsiness are sufficient evidence of what is happening. The amount of dust and dirt brought into the building by the constant change of audience, demands a thoroughness and frequency of cleansing which, in the best cases, is little likely to be realized.

Such—sections I. to IV.—are the more important points which are raised by the present nature and conditions of cinematograph shows.

The evils which undoubtedly exist can undoubtedly be largely, if not wholly, removed. There is no reason whatever why the pictures should not be thoroughly religious and moral—we do not mean goody-goody or preachy, but decent and wholesome—educational, instructive, pathetic (not morbid, harrowing and gruesome), entertaining, laughable, farcical (but not grossly and crudely unnatural, unmannerly and silly), and sentimental (not vulgar and familiar). All that is needed to bring about reforms is that official responsibilities should be wisely discharged, and that public opinion should be enlightened and stimulated; and child-study societies can, if they will, do much to this end. Each of the three types of members of child-study societies can do their share of the work. Parents can supply information as to what they know of the character of the pictures at places where their children attend; and of the effects upon their children of visits to such places. Teachers can obtain from the children themselves, through composition exercises, much important information, under such headings as: Do you like cinematograph shows, and why? How often do you go to them? What sort of pictures do you like best, and why? What sort do you dislike most, and why? What was the funniest, saddest, most ridiculous, most horrible set of pictures you have seen, and why? What pictures taught you the best lessons, and which the worst? Have you, or do you know of any one who has, done things because of pictures they have seen, and what? Have your eyes, or head, ached, or have you felt in any way unwell after being in a cinematograph show? What do you think could be done to make such shows more enjoyable? Are there any things which happen at these shows which you think ought to be stopped?

Both parents and teachers might put themselves to some little trouble in going to those shows which the children are likely to attend; and finding out the character of the pictures shown, and the nature of the general conditions which prevail. In questioning children great care should be taken to prevent the children from knowing or guessing the purpose of the inquiries; and in the case of school compositions it is most important that no general talk or discussion should precede the writing of answers. Children are so easily influenced by suggestions, however indirect, that the teacher's views will often be reflected rather than the children's own opinions given, *e.g.* they might describe as objectionable what they really enjoyed and approved, or as good and desirable what they disliked and resented. If children's tastes are wrong it is highly important that we should know it, and to get such knowledge would be one of the most valuable results of an inquiry. Teachers should, therefore, simply put the questions and leave the

children perfectly free and unbiassed as to their answers. The time for talk, explanations, instruction, etc., is after, not before, the children have truly revealed themselves on this matter.

Doctors can tell us what, if any, physical evils from attending cinematograph exhibitions have come under their notice. Also they may be able to say what should be the minimum distance between the screen and the nearest observer; what should be the maximum rate at which the movements in the pictures should be taken; and what the maximum intensity of illumination—if such things be determinable and subject to regulation.

There are, of course, other points which may occur to my readers. If any think the subject of such serious importance and urgency as to demand immediate action, I would venture to urge them to proceed forthwith, on some such lines as indicated above. I shall be glad to receive communications—addressed to 8, Hornsey Lane, London, N.—from parents and doctors, and will undertake to analyze and tabulate their contents, and draw up a report upon these. In the case of teachers I would like to have, in the first instance, specimens only of written compositions, *i.e.* three of the fullest and best, three of the average, and three of the weakest answers. From these I would endeavour, with the advice and help of the teachers, to draw up a tabular form, which the teachers themselves could use, and so obtain a uniform analysis of various sets of answers. Upon these the teachers could report, and I might—if they so desired—draw up a general report therefrom.

The value of such work would be that thereby, and therefrom, we should get facts, figures, opinions, and suggestions which could be put into a pamphlet, or an appeal, and used as a means of bringing about such reforms as are required. The appeal could be made to the public through the press, to the manufacturers of films, to cinematograph proprietors and managers, to Local Government bodies and education committees, and (if need be) to the Houses of Parliament.

I submit that this is a piece of work worthy of the best energies of our child-study societies, and in regard to which we may urge: "What thou doest do quickly."

THE PSYCHOLOGY OF READING.

By T. G. TIBBEY, B.A.

In April, 1907, a suggestive "Contribution to the Pedagogy of Reading and Writing" appeared in the *Archives de Psychologie*, and was briefly reviewed in the *Paidologist* (vol. ix. p. 119). In the issue of the *Archives* for March, 1910, the same authors, M. le Dr. O. Decroly and Mlle. J. Degand, provide yet a further "Contribution à la Psychologie de la Lecture."

On analysis, reading can be shown to call for the intervention of several distinct powers, of which the visual and the motor are the most evident, and in teaching reading the question always arises as to whether it is advisable to cultivate these separately or together. The writers call attention to an earlier article on the psychology of reading in the *Revue Scientifique* for March, 1906, in which this point has been considered, restating their opinion that it is useless, and may even be dangerous, to attempt to teach together the auditive analysis of the word and its representation in writing. Since then, however, they have made further observation on the reading process in other children mentally defective in various ways.

A little lad of eight had been taught, with some difficulty, in the method indicated in the earlier article, to read mentally and carry out certain written commands, such as to raise the arms, open the window, close the doors, etc., but had not been called upon to read the words aloud. His actions showed that in some way he connected the appearance of a certain assemblage of words with some definite action which he had seen performed. Then some pictures showing a boy running, leaping, raising his arms, opening a window, etc., having been fixed on some cards, labels were made with corresponding sentences written upon them, "The boy runs, leaps," etc., and from these the little lad had to select the right one and place it beneath the appropriate picture. This was successfully accomplished, and at the same time he was able to say what the pictures meant. But when these latter were absent, it was impossible for him to express verbally what he had read mentally on the labels. The same result appeared when it was a question of names of things; he had been taught to recognize the written names of certain objects, could put the name upon the thing, and the

object upon its right name, but in the absence of the object he could not read the name on the label. This child had the visual-verbal centre intact, but the centre for verbal expression of graphic signs, and more probably the paths of association between these, were imperfect.

Another lad of fourteen years could, as above, place the right names upon objects, or could draw the thing when the name was shown; but though he could speak in a somewhat elementary manner, and could repeat words, he could not read the names the meanings of which he knew. Thus the word "*dé*" being put before him, he would show the top of his middle finger, and would try to find the word, but without success. For the word "*ciseaux*" he would make the sign of cutting, and sometimes, having repeated the sign a number of times, the word would come to him; this was true of this word only. Some others he would describe by association: thus, for the word "*lait*" he would say "*à boire*," for the word "*poule*," "*au jardin*," at the same time pointing to the fowlhouse. Thus, whilst he could retain visual images, he could not fix motor-verbal images.

A third lad, of thirteen, could understand and carry out commands written upon a blackboard, and could, as before, put the right titles to pictures or to objects, but could not read orally. On some days, with a text before him, he would remain silent; on other days he would read the longer words, omitting pronouns, articles, etc. Further, when called upon to read separate words, he would give instead sometimes a synonym, sometimes a periphrasis, and at others an associated word. He could say the names of various common objects drawn in his exercise book; he could place, as before, the correct label beneath them, and could then say this written word, but he was apt to fail when asked to read the word apart from the concrete image, often expressing its meaning by a phrase indicating its use. His writing was good, and he could transcribe exactly, but could not express his own thoughts in writing; whilst writing from dictation was very defective, even though he had seen the words before. A common fault was the omission of certain letters, especially A.

The fourth subject was a little deaf lad who had been taught to read by the method of complete ideas and concrete words detailed in the earlier article. At eight and a half years he had a fairly good oral and graphic vocabulary, but showed at times a lack of association between the features and names of well-known objects. Thus, a picture of a hen being shown, the child named its different parts correctly; but being called upon to read the phrase, "The hen has some feathers, two wings, two feet," etc., he hesitated at the first word "two," and after a pause said, "to fly with." The written visual image had awakened an

exact idea of the use of the thing, but this was not associated with the motor image of language. Similarly, on other occasions, "*vilain*" was expressed as "*très pas beau*," and "*barbe*" as "*Comme, M. D.*"—the child at the same time imitating the action of a man pulling at his beard.

The authors further observed that even normal children do not escape similar lapses. A little girl of five years, seeing a number of other children learning to read, wished to do so too. Being interested in animals, from her visits to a natural history museum, she carried in a small bag a number of cards, each bearing the name of a different animal, and these, among other words, she read easily. The word "*niche*" being presented to her, she knew that it meant something for a dog, and offered to draw the thing, but could not say the name. Another time she came across the word "*phoque*" and said she knew it but could not say it. She said she had seen the animal at the museum, that it lived in water, in a cold land, and had curious feet, but could not tell what the word was. She was in the position of one who has a clear visual image of a thing, but cannot recall its name, only that she had the word before her. Somewhat similar experiences were had with a younger sister of this same girl, who at three years of age could read some thirty words, the names of known objects.

The last case cited is that of a youth of eighteen who, though in many respects intelligent, was unable to read a sentence correctly. He would change some terms, omit others, add others, and yet, if it were prose, often in such a way as not to materially change the sense of the piece. Moreover, after the reading he could yet reproduce with intelligence what he had read. Sometimes he would put a plural for a singular noun, or *vice versâ*, always, however, making the verb agree with its subject. The reading of verse was very difficult for him ; often what he said was quite different in meaning to what was printed, and yet again he would sometimes carry away a correct idea of the meaning.

Neither could this youth copy correctly ; he took 37 minutes, 30 minutes, and 35 minutes respectively to copy twelve lines of print, omitting many letters in the process. His own written composition was deplorable ; he omitted important words, syllables and letters, and changed the order of syllables. Though he was able to abstract and generalize fairly well, and could retain ideas in their proper order, he was defective in all that required the intervention of the muscles.

Those who have taught young children to read will recognize in the above records some of the difficulties that occasionally arise under normal conditions. It is interesting, therefore, to have these lapses traced back somewhat more nearly to their origin, and to realize that many of the mistakes made by children are not due to original sin, nor

unwillingness to learn, nor are they to be always embraced under that all-inclusive formula, "lack of attention," but may be due in part to some slowness in functioning of some one factor in the learning process. Furthermore, one realizes again the truth upon which Professor Huey insists in his "Psychology of Reading," that this essentially artificial acquirement upon which so much of our mental life depends, is very complex, depending for successful operation upon many factors. When we consider how delicately these have to be adjusted to one another, we need not wonder that "learning to read" is a slow and difficult process, but rather that under some methods the child has ever learnt to read at all. He has occasionally perhaps succeeded in spite of the teaching rather than because of it.

SUGGESTIONS FOR PARENTS AND TEACHERS.

Care of the Eyes.—"The improper use of the eyes in the growing years of a child, either by reason of bad or excessive light, the use of improper materials, prolonged close work, or of any work at all during periods of poor health, will account for the onset of asthenopia, squint, myopia, and even of mental fatigue of serious order. . . . For infants and myopes I should like to see them [books] abolished."—*Dr. N. Bishop Harman*, on "The Eyes and Vision of School Children," in *School Hygiene*, August, 1910—an unusually important and valuable paper which all teachers (especially) and parents should seriously study.

Rest and Work.—"The teacher should know the most favourable periods for work and rest in a given field. Our study showed that practice when the learners were nervous or tired was not only worthless so far as strengthening old associations was concerned, but was positively injurious, because it made conditions favourable for forming wrong habits of mind and hand. The best results for learning can only be obtained when the periods of practice or study are, on the one hand, of such lengths as will give the greatest amount of practice to the habits to be formed with the best opportunity for developing interferences, and when the intervals between the practice of study periods are, on the other hand, of such length as will insure the most complete dropping out of the interfering tendencies naturally formed in the course of learning, with the least possible fading on the part of the associations to be established. Further investigation must determine what the most economic periods of work and rest in the different fields of learning are. It will be the privilege of the teacher, when this shall have been done, to make the right adjustment here as well as so to guide and direct his students that a minimum of

interferences will be formed."—*Professor W. F. Book*, on "The Rôle of the Teacher in Economic Learning," in *The Journal of Educational Psychology* (American), April, 1910.

Muscles and Morals.—"No conduct goes on without nutrition, muscle, and nerve, and it stands to reason that the better developed and co-ordinated these physical processes, *other things being equal*, the more capable a man is of the highest moral conduct; for not only can he the more easily carry on the labour by which he obtains his daily bread, but he has abundant resources left for carrying out work for others, and for being a buoyant social creature. . . .

"The exponents of physical improvement thus have a very powerful argument for the worth of their particular cause from a moral standpoint without the necessity of exaggeration by way of example. Physical development does not give a man a higher moral nature, but it allows him to exercise that nature if he has it. . . . Anything which interferes with bodily growth and with that normal balancing of bodily energies which we call health, must be productive, if not of immorality, at least of diminished capability for the highest moral attainment; and, viewed from this standpoint, the matter of the conduct of the public school with regard to these fundamental ends is of the utmost seriousness. . . .

"Moral education is said to be the end of all education; if so, from every point of view, physical education, preventive as well as helpful, looms up with growing importance."—*Dr. J. F. Rogers*, on "Physical and Moral Training," *The Pedagogical Seminary*, September, 1909.

Imagination and Play.—"There has been a curious, almost unaccountable, tendency in the kindergarten to assume that because the value of the activity lies in what it stands for to the child, therefore the materials used must be as artificial as possible, and that one must keep carefully away from real things and real acts on the part of the child. Thus one hears of gardening activities which are carried on by sprinkling grains of sand for seeds: the child sweeps and dusts a make-believe room with make-believe brooms and cloths; he sets a table, using only paper cut in the flat (and even then cut with reference to geometric designs rather than dishes), instead of toy tea-things with which the child outside the kindergarten plays. Dolls, toy locomotives, and trains of cars, etc., are tabooed as altogether too grossly real—and hence not cultivating the child's imagination.

"All this is surely mere superstition. The imaginative play of the child's mind comes through the cluster of suggestions, reminiscences, and anticipations that gather about the things he uses. The more

natural and straightforward these are, the more definite basis there is for calling up and holding together all the allied suggestions which make his imaginative play really representative. The simple cooking, dish-washing, dusting, etc., which the children do are no more prosaic or utilitarian to them than would be, say, the game of the Five Knights. To the children these occupations are surcharged with a sense of the mysterious values that attach to whatever their elders are concerned with. The materials, then, must be as "real," as direct and straightforward, as opportunity permits."—*Professor Dewey*, in his Essay on "The Kindergarten," see *The School and the Child* (see review columns).

NOTES.

MSS. for the Journal.—Several members have been good enough to send in MSS. for consideration. The editor much regrets that some were not found to be suitable: they either dealt with matters already treated of in previous papers, or were not on specifically child-study topics. Will members please note that the Journal Committee wish to keep the contents of our journal as strictly and scientifically child-study as possible—allowing, of course, all proper and reasonable exceptions. It is hoped that no one who forwards MS. which is found unsuitable will feel injured or discouraged. "Be not weary in well doing!"

No extracts for inclusion under "Suggestions for Parents and Teachers" have been received; nor any contributions from secretaries or others for these "Notes." Who will break the ice in these matters?

The Child-Study Society as a Social Influence.—Miss Alice Ravenhill is strongly of opinion that the Child-Study Society should make itself felt in matters of importance to the public. She suggests that much good could be done by an investigation into, and report upon, the working and effects of Children's Courts. The results might be used in some such ways as are suggested in "Children and Cinematographs," in this number.

Journal Circulation.—The editor would be glad to receive suggestions as to methods for increasing the circulation of *Child-Study*. He would like to know the views of secretaries, etc., as to the possibility of (*a*) selling copies at meetings, and (*b*) getting copies sold at shops—if the Journal Committee can be persuaded to send a certain number of copies "on sale or return" conditions.

Lecture Lists of the Constituent Societies.—BIRMINGHAM: Not yet finally fixed, but Drs. Helen Wodehouse, Walter Jordan, and R. Langdon-Down will give lectures during the session. CHELTENHAM: "*School from the Inside*," R. Gibson, Esq. (Headmaster King Edward's School), in October; "*Heredity and Environment*," Dr. Hebblethwaite, in November; "*The Heir of all the Ages*," Miss Nixon, in December. DUNDEE: The Committee hope to be able to arrange at least four lectures. It is hoped also that the Society may be able to co-operate with the Edinburgh Society in some piece of practical investigation. EDINBURGH: Not yet finally fixed. HALIFAX: "*Imitation and Imagination*," Professor Lloyd Morgan, Wednesday, September 28, at 7.30 p.m.; "*Some Characteristics of Adolescence*," Miss Alice Ravenhill, Thursday, October 6, at 7.30 p.m.; "*The Educational Doctrine of Pestalozzi*," Professor Welton, Thursday, October 27, at 7 p.m.; "*Coming Problems of Adolescent Training*," Dr. F. Hayward, Saturday, November 26, at

3 p.m.; "*Historic Origins of Children's Games*," Miss Margaret Cleghorn, Thursday, December 8, at 7.30 p.m.; "*Fairy Tales for Children*," E. J. Wareham, Esq., Thursday, January 19, at 7.30 p.m.; "*The Physique of the Nation's Children*," Dr. T. N. Kelynack, Thursday, February 2, at 7.30 p.m. LONDON: "*Some First Results of an Investigation into the Play Interests of English School Children*," Miss Alice Ravenhill, Thursday, October 13, at 7.30 p.m., Chairman: Sir J. Crichton Browne; "*Games and Toys for Children under Eight*," Miss Clara E. Grant, Thursday, October 27, at 7.30 p.m., Chairman: Dr. C. W. Kimmins; "*Story of some Children's Games*," Mrs. Lawrence Gomme, Thursday, November 3, at 7.30 p.m., Chairman: Professor Adams; "*Origin of Games and Toys*," Professor A. C. Haddon, Thursday, November 17, at 7.30 p.m., Chairman: H. Holman, Esq., M.A.; "*Philosophy of Boys' Games*," Felix Clay, Esq., F.R.I.B.A., Thursday, November 24, at 7.30 p.m., Chairman: Dr. James Kerr; "*The Child's Inheritance*," Dr. C. W. Saleeby, Thursday, December 1, at 7.30 p.m., Chairman: Sir Edward Brabrook. LIVERPOOL: Not yet definitely arranged. MANCHESTER: "*Childhood Suffrage, or the Rights of Boys and Girls*," John Russell, Esq., M.A. (Headmaster King Alfred Society School), Friday, October 14; "*The Infants' Department from the School Medical Officer's Point of View*," Dr. Ritchie (Medical Officer for Schools under Manchester Education Committee), Friday, November 18; "*Experimental Tests of Memory*," J. H. Pear, Esq. (Lecturer in Experimental Psychology, Manchester University), Saturday, December 10; "*The Teaching of Reading*," Miss Wroe (Principal Manchester Kindergarten Training College), January 21; "*Handwork connected with the History of Primitive Man*," Miss Findlay, February 26; A social meeting in March. EXETER: This society hopes to arrange, before Christmas, the usual reading circles and these lectures:—"*Children in Literature*," Miss Amy Short, B.A.; "*Moral Training in Schools*," F. J. Gould, Esq.; "*The Law as affecting the Health and Education of Children of School Age*," H. Lloyd Parry, Esq., B.A., B.Sc., LL.B.

International Congress on Pédologie.—As a result of the international voting it has been decided that the first *Congrès internation aux de Pédologie* shall be held in 1911, during the month of August or September, in Belgium; be "international" in the ordinary sense of the word; last for four days; and have a subscription of 20 francs. The syllabus includes "Hygiene, Anthropométrie, Physiologie, Psychologie (Normale et Anormale), Pédagogie (Normale et Anormale), Sociologie Infantiles, Pédotechnie, Psychologie Animale."

The British Association.—At the meeting held in Sheffield last month, methods for testing and standardizing the intelligence of children were the subjects of several papers and discussions.

Enlarging our Borders.—A teacher member of one of our societies has conceived the happy idea of writing to the secretary for twelve cards of lectures, so that she might send a copy to each of the managers of her school, and thus bring the work of *Child-Study* to their notice. *Verb. sap.*

REVIEWS.

Mental Fatigue and its Measurement by the Æsthesiometer. By A. R. ABELSON. Pp. 147. Leipzig: Wilhelm Engelmann.

In this essay Dr. Abelson adduces experimental evidence to prove that the sensitiveness of the skin to touch declines with the oncoming of mental fatigue; and seeks in this decline a means of estimating the degree of mental fatigue present.

After defining "fatigue" as distinguished from boredom, the author briefly

describes various methods of estimating its degree, omitting, by the way, Dr. MacDougall's (*Brit. Journ. Psychology*, vol. i. part 4, Oct., 1905), and then gives a full bibliographical sketch of the subject.

Then follows a chapter on the fallacies of various methods of æsthesiometry and the precautions necessary to obtain reliable data.

Dr. Abelson finds special training requisite for this kind of research, as did Trotter, Davies, and others for their studies on skin innervation (*Journal of Physiology*, vol. xxxviii., Nos. 2 and 3, Feb. 1909, p. 136), and he describes and illustrates his own methods and apparatus.

The remaining half of the book is devoted to a detailed exposition of the multitudinous experiments made by the author and teachers trained by himself on adults and children to elucidate the relation between work, sensitiveness, and fatigue, under various conditions.

A valuable summary of general conclusions respecting the distribution of school work and other matters of especial interest to teachers completes the volumes.

The weakness of æsthesiometry as a guide to mental fatigue lies in the elaborate technicality of the testing process, and in the truth that the power of discriminating touches is influenced by boredom and many other factors besides mental fatigue.

Enormous numbers of observations must, consequently, be made to obtain *average* results of value, and these appeal more to drill sergeants than teachers.

Nevertheless, this study of fatigue may be heartily commended to all concerned with the economics of national education, to philanthropists and states(wo)men, to parents and teachers, and last, but not least, to the mere ratepayer.

A. B. K.

Medical Examination of Schools and Scholars. By many authors. 8vo. Pp. xvi. + 434. London: P. S. King & Co. 10*s.* 6*d.* net.

Now that medical inspection has become firmly established in most countries, it is most useful to be able to take stock of the aims and methods of procedure of those entrusted with the task.

Such a summary is afforded by the present work, of which the first part gives an account of inspection as carried out in the United Kingdom, while the remainder explains the extent and procedure in our Colonies, the United States, Germany, France, Scandinavia, and Switzerland.

Each chapter is a separate essay by some well-known authority, so that although considerable overlapping results it is more than compensated for by the insight given into the views and methods of the contributors. The bibliography attached to each article is of special value. The aim of the work is stated in the preface to be to provide a complete guide for school medical officers, and to afford educationalists and all interested in the welfare of the school child with a reliable and authoritative exposition of the methods and means whereby the best use may be made of the machinery at present available. The first aim is amply fulfilled, and the school medical officer with some little experience of conditions actually existing in schools will find it difficult to lay the task aside unfinished. The educationalist may find some of the sections somewhat technical, but it is well that he should realize some of the difficulties arising in special cases, and note that while the examination of the average healthy child can be rapidly conducted, the investigation of those physically or mentally defective often requires a considerable expenditure of time if an accurate working diagnosis is to be arrived at.

Throughout attention is drawn to the real aim of medical inspection being the amelioration of the conditions of the individual child rather than a national stock-

taking, and that this aim cannot be effectively carried out unless inspection becomes correlated in some way with treatment and the inculcation of a national conscience in hygienic matters. Dr. Leslie Mackenzie lays especial emphasis on this, pointing out that "Quantities are the temptation of every medical officer. It is so easy to be satisfied with an average and to forget that the end—the only end worth thinking about—is to make the individual child fitter for the strains of living. As in public health, so in medical inspection, there are some signs that the living child is beginning to be lost in the maze of dead figures." Yet educationalists should note that in each article indications are given of how it is hoped to make matters more individual, and that it will be time enough to collect more data when the immediate and obvious defects have been remedied, and the first principles of hygiene introduced into each home and every school. The need for consideration of secondary as well as elementary schools is adequately recognized; though some set conspicuous example of good work, others are sadly lacking, an experience which seems to be common to all countries.

The perusal of this work is essential to all who desire a knowledge of the present position of medical inspection throughout the civilized world, and to realize adequately the desires of some of its leading professional advocates.

F. C. S.

Paedologisch Jaarboek, onder redactie van Professor Dr. Phil. M. C. SCHUYTEN. 1908.

Experimental pedagogy in Belgium is represented by Dr. Schuyten, of Antwerp, whose *Paedologisch Jaarboek* has now (1910) reached its ninth year. In the 1908 volume before us a series of researches, some of considerable importance, are recounted in the Flemish language, a convenient *résumé* in French accompanying each.

The titles sufficiently indicate the nature of the investigations: (1) Sur la consommation du pain chez les enfants et la courbe annuelle de l'energie vitale; (2) Recherches esthésiométriques faites sur des élèves adultes qui suivent un cours du soir; (3) La gaucherie des membres supérieurs en rapport avec le développement intellectuel des enfants; (4) Contribution à nos connaissances de la droiterie et de la gaucherie des membres inférieurs; (5) Recherches sur la classification intellectuelle des écoliers normaux; (6) Recherches sur la variabilité psychique ininterrompue de l'enfant.

Among Dr. Schuyten's results (some of which will have a familiar sound to students of experimental pedagogy) may be mentioned the following, numbered according to above list of researches:—

How far does the workman's fatigue affect his power of evening study? It was found that an evening lesson actually seemed to increase the cutaneous sensibility of most students. Our school hours are wrong; the best hours for work are 8.30 to 10.30 in the morning, and 6 to 9 in the evening. The middle of the day, with its sunshine, etc., should not be passed in school (2).

From animals, through children to adults, leg-asymmetry regularly increases, the left leg being increasingly longer than the right. Differences of intelligence also show themselves by dynamometric tests of the two hands (3) (4).

The æsthesiometer is to some extent a more satisfactory test of intelligence than the empirical methods of the teacher. Unintelligent children are found to be insensitive. They also fatigue more early. Memory is the next best test of intelligence (5).

Muscular and psychical energy are constantly changing in amount, apart from considerations of fatigue. Intelligent children are more asymmetrical than unintelligent. Intelligent and older children have better memories than unintelligent or younger ones (6).

F. H. H.

Sir Joshua Reynolds: The Discourses. A selection edited by Professor J. J. FINDLAY. Pp. xiii. + 216. Blackie. 2*s.* net.

The School and the Child. JOHN DEWEY. Pp. 127. Selections, edited by J. J. FINDLAY. Blackie. 1*s.* net.

These two volumes of Messrs. Blackie & Son's "Library of Pedagogics" are highly creditable to the publishers as to their production. Of Sir Joshua Reynolds' *Discourses* nothing need be said as to their literary merit, but as to their place and purpose in a library of pedagogics a few words are necessary. Anything that so great a master has written must be full of fruitful suggestions to minds able to appreciate them, but it is very unusual for such writings to contain any but remote and obscure pedagogical principles. The present writer does not find the *Discourses* to be an exception to the rule. Sir Joshua's idea of teaching is to tell all that his genius and labours have revealed to him; and telling is not teaching, in the pedagogical sense.

To art masters, teachers of adult students, and adult students themselves, much good will, doubtless, come from reading this book of selections, but the young teacher, and those engaged in teaching children can use their time to better advantage than in studying the *Discourses* for pedagogical guidance. Sir Joshua carefully points out that he is addressing art students who have already gained a "faculty of drawing any object that presents itself, a tolerable readiness in the management of colours, and an acquaintance with the most simple and obvious rules of composition." Teachers can judge for themselves how far they are qualified to be in such an audience.

The editor says, on p. viii., that he "is a child in matters of art—nay, worse than a child"; while on p. x. he says, as though speaking as one having authority:—"it may be questioned whether the prevailing conception of the artistic ideal corresponds to any serious extent with the lofty and manly claims which are exhibited in the *Discourses*." It is difficult to reconcile these statements.

The nine essays by Professor Dewey, under the title of *The School and the Child*, deal with the following topics: the child and the curriculum; the kindergarten; general principles of work, educationally considered; historical development of inventions and occupations; children of eight years of age [school work for]; psychology of occupations; reflective attention; the aim of history in elementary education; the psychology of the elementary curriculum. They are more than worth the serious study of every teacher—however much the reader may differ from the views advanced—and the editor has done a real service to teachers in making them accessible in this form.

H. H.

Manual of Object Lessons. H. P. and W. L. Rooper. Pp. 352. Swan Sonnenschein. 1*s.* 6*d.*

This is a book which professes to teach teachers how to teach children to talk, but which is likely to do the very opposite. It is drawn up on the catechetical plan, though the authors say it should not be so used. It is difficult to understand such an attitude, for either those who use the book must already be wiser than the method, or they will be too ignorant to be able to improve upon it.

The very artificial and quite spurious "answer-in-a-sentence" idea is worked to death. The proper answer to such a question as "What are these two legs called, since they are behind?" is "hind-legs"; not "Those two legs, since they are behind, are called hind-legs" (pp. 216–217). The so-called answer is not the child's sentence at all, but a mere trick repetition of words already supplied by the teacher, in

the question, with a slight addition. Further, the question is a bad one, since if the children already knew the answer, it is wastefully superfluous; while if they did not know the answer, it is useless to ask them. It is the teacher's business to know how to ask questions which demand sentence answers, *e.g.* "What can you tell me about this?"

Much of the questioning is bad in conception and form, *e.g. T.* "Then the chair has a ——?" *C.* "The chair has a seat." A score of different answers might easily have been given to such a vague question; and only by drilling in school tricks can such a method get the answers desired. Still worse are questions as, "With what are not all animals covered?" (p. 320); "What will none of you be?" and the answer "We will none of us be greedy pigs" (p. 352); "How must you take off your hat when you greet somebody?" and the answer, "We should take our hats quite off" (p. 128). Will the authors tell us how to take off a hat without taking it "quite off" and if this mode of greeting is appropriate for a boy of five greeting a boy of two?

The reviewer regrets that he cannot find matter for praise in the book.

H. H.

L'Educateur Moderne. March to July, 1910. H. PAULIN & CIE. Paris.

One of the most useful articles is that by M. Hémon in the March issue, on some inquiries into the psychological conditions of spelling. He discovered that a Japanese student, who had lived in France six years, pronounced badly because he had never clearly distinguished the sounds of the words, and spelt badly because his articulation was at fault. Some experiments made on a class of girls confirmed his view that training in distinguishing spoken sounds and in careful articulation would overcome many spelling errors more effectively than only spelling, or reading, or writing words. The point is not new, but is often enough neglected to bear repetition, and this careful article will well repay perusal.

In the April issue Mr. Roger Cousinet writes, as always, very sensibly upon affection in children. He urges that the first thing the child has to do in the world is to learn to know it, hence there is little place for the life of feeling in young children —its development lies with the adult. The variableness of their memory accentuates this; just because their affections are not easily fixed, they easily lapse, unless constantly renewed. All the power of the child's mind during its first years goes in understanding and organizing the world.

In the May number Mlle. Berillon puts the promotion of happiness as the end of education, and investigates all parts of the field, physical, intellectual, and moral, to support her thesis and show the way to success.

The issue for July is better than usual. Dr. Victor Pauchet gives a *résumé* of the Conference of the French Vegetarian Society, which he entitles "*The Art of Remaining Young.*" The subject seems to have some connection with child-study; the treatment is thorough, and the suggestions may be useful. M. Cousinet provides an interesting article on "*The Authority of the Master in his Classes.*" One wonders whether there are classes in England where quite the same things happen. The "chahut," to quote the school-boy's slang term, must make unbearable the lives of the masters subjected to it. M. Cousinet examines the question why some should be so subject to it and others not, with many examples. He concludes that what the teacher most needs to keep his class in hand is insight, the quiet power of detecting tricks and jokes, and getting to the bottom of the pupil's hearts. He needs to keep his mind alert to all the life of the class, to see in his pupils something more than scholars. Yet there are some who may do all that, and yet not conspicuously succeed in maintaining discipline. Perhaps the secret may not be told. Some selections from a forthcoming work by Professor F. Queyrat, on the Psychology of Curiosity, are interesting.

T. G. T.

Betterment: the Official Organ of the Betterment League.—This is a new monthly penny magazine, edited by Alfred E. Hayes, whose object it is "to provide a common rallying ground, for all who love their country, and who believe that Betterment must begin with the Child." The editor desires to bring about co-ordination and co-operation amongst all societies "aiming at Civic Health and Beauty through Consideration for the Child," and he holds that he can find a centre for corporate enthusiasm amongst those interested in the upbringing of citizens by concentrating their efforts on "The Child and the City Beautiful." Mrs. Higgs' well-known work in relation to the "Beautiful Oldham" crusade is taken as the model.

The magazine is ably edited and full of interesting and informing matter. It deserves a great success, for its aim is wholly beneficent, even to the devoting of any profits—after paying expenses and five per cent. on capital—to the furthering of the ideas it advocates. H. H.

The Pedagogical Seminary, June, 1910, opens with an interesting article on "The Moving Picture in Relation to Education, Health, Delinquency, and Crime," by Dr. J. E. Wallace Wallin. I have made use of this in my article on "Children and Cinematographs," in this issue of *Child-Study*. Teachers of voice training will find help and guidance in "The Mechanism of the Voice and its Hygiene," by Harry P. Weld. There is a short bibliography attached. Dr. Stanley Hall writes a "General Outline of the New Child-Study Work at Clark University," and this is expanded by separate reports on the various departments, viz. "The Library," by Dr. Louis N. Wilson; "Correspondence," by Dr. Theodate L. Smith; "School Hygiene," by Dr. Wm. H. Burnham; "Work with the Backward and Sub-Normal," by Harry W. Chase; "Experimental Didactus," by Dr. Amy E. Tanner; "Child Linguistics," by Dr. John A. Magni; and "Special Child Surveys," by Clark University students. All interested in the future of child-study work should carefully read these articles, to learn how vast and vital are the topics with which we are concerned. An outspoken article on "The Teaching of the Facts of Sex in the Public School," by Clara Schmitt, raises grave issues which demand serious attention. It has a selected bibliography appended. The concluding article is on "The Contents of Children's Minds," and is by Dr. Walter Libby and five co-workers. This gives the results of oral questioning, and of written work of "Children who had not entered school, others who on account of their social conditions had lacked the advantages of home training, others again who had entered the high school, and finally a group of white and coloured children." H. H.

Publications Received.—*Eugenics Review; Journal of Education; Educational Times; Child Life;* "*Manual Training*"; "*Practical Spelling*" (Longmans, 6*d.*); *Parent's Review;* "*Evening Play Centres*" and "*Report of Certain Vacation Schools and Playgrounds*" (from Mrs. Humphrey Ward); "*School Hygiene*"; "*Medical Education in the United States and Canada*" (The Carnegie Foundation for the Advancement of Teaching, New York City); "*Open Air Recovery School*" (Report to City of Sheffield Education Committee by Dr. R. P. Williams); "*The Health Visitor*" (National League for Physical Education and Improvement, 1*d.*); "*Dangers to Health*" (Herbert H. Tidswell); "*Scales without Weights,*" a paper on the mental attitude of boys toward religion (Alex. Devine); "*Report on the Employment of Children in the United Kingdom*" (British Association for Labour Legislation, 3*d.*); "*The Dormouse, and other Nature Songs*" (The Vincent Music Co., 1*s. net*).

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Child-Study.

The Journal of the Child-Study Society.

SOME RESULTS OF AN INQUIRY INTO THE PLAY INTERESTS OF ENGLISH ELEMENTARY SCHOOL CHILDREN.

By Miss ALICE RAVENHILL, F.R.San.I.

A Paper read before the London Society, October 13, 1910.

This Inquiry was undertaken as a result of the marked growth of interest (1) in children's games, and (2) in the provision of opportunities for them to gratify their natural desire to play. Few now dispute that such provision is essential, but, for the most part, the wish to make it springs chiefly from a conviction that the physical activities and moral training associated with play are valuable factors in healthful growth. No one questions the value of their influence, nor the wisdom of the motives which promote their realization; only, in order that the full benefit of play shall accrue to our child population, another feature of equal importance calls for recognition—that is, the biological significance of play activities.

A brief reminder of the three main theories for the universal impulse to play will serve best to illustrate my point. The first of these lays stress on the worth of play as an outlet for superabundant physical energy, and demands place for its gratification as indispensable to physiological well-being. Herbert Spencer is perhaps the best-known exponent of this suggestive, but not sufficiently comprehensive, theory.

The second theory sees in play the opportunity chosen of Nature for the development and practice of abilities which possess a prospective rather than a present value, in that their development equips the individual for useful work in later life. The skill and thought exercised in games, the healthy growth of brain and muscle under the influence of joyous exercise, represent, to the supporters of this point of view,

useful assets for successful work in maturity. This utilitarian aim is certainly present in the minds of some town children, as is shown by their reasons for favourite pursuits; but it is difficult to gauge the degree to which such reasons are prompted by association with adults and other environmental factors, or how far they actually influence selection of hobbies or toys. In any case, this theory alone would be insufficient to account for the universal strength of the play spirit in early life.

The third theory sees in play the functioning of nascent instincts; the expression of deeply seated racial activities; the gradual rehearsal—genetic or historic, if so it please you to describe it—of powers and interests of paramount necessity at earlier periods of man's existence, and still important, because they constitute the foundation and scaffolding essential to the stability of the superstructure of habits and methods appropriate to latter-day civilization. For these reasons, this theory is usually described as the *biological*. In its great scope it practically includes both the physiological and the utilitarian, while, in addition, it supplies reasons—educational and psychological—of profound significance, many of which have been advanced by English psychologists and have been in numerous instances corroborated by the investigations into the subject pursued chiefly in the United States of America.

The results of these observations show that, to the primitive social play of the infant (*e.g.* Bo-peep, fisticuffs, ride-a-cock-horse, etc.), succeeds, as a rule, a period when the active little boy or girl is quite happy—indeed, prefers—to play alone for many hours in the day, although sympathetic interest in feats performed, or in difficulties overcome, is sought for and appreciated by the little player, while rhythmic ring games with companions are entered into with zest. Associated with the growing power to control muscular co-ordinations, prominent about the age of eight or nine, there is a rapid quickening of the competitive spirit, and activities or games which permit its exhibition are first favourites —skipping, swinging, stilt-walking, or parlour games, such as loto, for instance, or the performance of deeds of prowess by imaginary robbers, pirates, or Red Indians. Ability to appreciate the true characteristics of co-operative games does not normally develop till the early stages of adolescence—that is to say, from the age of eleven onwards. Under the good influence of our traditional English games, it should strengthen each succeeding year, and result in that social discipline which trains the individual to subordinate himself and his wishes to the requirements of his comrades or the rules of the game.

If the biological theory be accepted as the basis of children's play impulses, the importance of suiting their play to successive stages of

development impresses itself more and more upon the mind, and the risks associated with imposing upon the children conditions of play which happen to suit our convenience, rather than their requirements, assume considerable prominence. Again and again, therefore, have the questions presented themselves to my mind: Do we sufficiently respect these biological factors in our play schemes to-day? Do we permit our children's games to exercise to the full their vast developmental functions? Do we follow the normal child's lead, or do we superimpose our adult ideas upon his deeply seated, nascent instincts, killing where we aim to quicken?

In the hope of throwing some light upon these problems, I undertook the Inquiry, of which I now bring before you a few first skimmings. The mass of material collected for me by the many teachers, who most generously responded to my requests for help from all parts of England, will take months to analyze and arrange. It evidently constitutes a veritable mine of interest, for, in spite of some reproaches received from lovers of children, rebuking, as untimely and misleading, my efforts to learn their tastes and the reasons for their choice of pastimes, the little people themselves apparently enjoyed the inquiry, many of them writing me their thanks for the "pleasant questions" I invited them to answer. The trouble taken by their teachers can never be adequately acknowledged or repaid; their interest in my objects was manifest, and their efforts to secure honest answers were strenuous. Needless to say, for the most part in the case of children under eight, the replies were obtained conversationally and written down for each child by its teacher—no light labour for busy people.

About 9000 separate forms of inquiry were issued, 6369 were returned in a condition which permitted their utilization for statistical purposes. They are confined to boys and girls from three to thirteen years of age in attendance at the elementary schools in various towns and villages of England. These ages were subdivided into nine groups for purposes of analysis; the small number of returns from children between three and six years of age (consequent upon their inability to formulate independently any definite or reliable replies) making it convenient to mass them together.

The results of the points selected for this first analysis of my material are presented in chart form, as at once the most concise and interesting. In each series of these charts, two, (A) and (B), refer respectively to 4002 girls and 2367 boys, while the third, (C), presents the results of striking an average based upon the combined returns from 6369 girls and boys.

Perhaps the first impression received on glancing through the papers

was the abundant confirmation they afford of the opinion that love of activity is the strongest incentive to play, and that, in free play, this activity assumes a great variety of forms, involving extensive neuro-muscular co-ordinations. It is also clearly demonstrated that some capacity for movement, active or passive, enters into a child's conception of what constitutes a toy. To these points I shall refer again when I bring before you a summary of the children's reasons for choice of favourite game or plaything.

Surprise at the number of games enumerated by the children ranked next in order of first impressions. It became rapidly evident that to attempt any detailed classification of these numerous games must stand over for the present; all that was possible in the first instance, though I am well aware the method is not ideal, was to group those most frequently mentioned under five comprehensive heads. The curves, therefore, in the Game series of charts depict (1) all games played with *balls;* (2) all games which involve *physical activity* WITH the co-operation of companions, such as ring games, hide-and-seek, or rounders (these I have called *active social games*); (3) all amusements involving only *individual activity* or *skill*, such as skipping, hopping, or roller skating (these are grouped as *individual active games*); (4) *parlour games*, such as ludo, draughts, or Happy Families; and (5) *dramatic* or *make-believe games*, such as playing at school, shop, or soldiers, acting charades, or dancing; folk dancing being that usually referred to by the children.

The whole series of charts present the results of the analysis of the replies to the following four questions, made by 6369 children :—

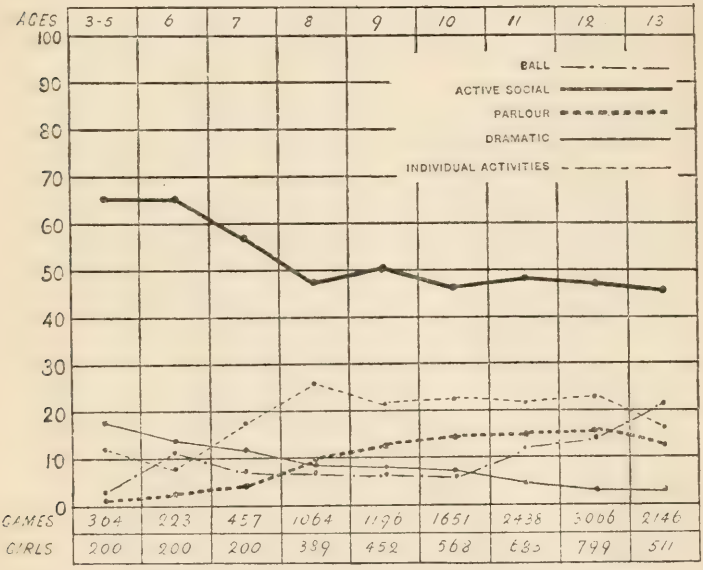
What are your favourite games? Why?

What are your favourite toys? Why?

No satisfactory representation of the children's views on the subject of favourite games could be given by one chart, consequently the curves in Series I. (A), (B), (C), illustrate their preferences for *different types of games at each age*, calculated from the frequency of mention in the grand total of games enumerated (21,444); while Series II., (A) and (B), depict the preferences expressed at each age for *certain specified games*, by the total number of girls or boys.

The strength of the gregarious instinct, upon the prevalent exaggeration of which Professor MacDougal has recently uttered a note of warning, is well illustrated in Series I. of my charts; active-social games are easily first favourites throughout school-life. As shown in Chart I. (A) in the case of girls they comprehend 65·75 per cent. of those mentioned by three to five-year-old children, and constitute 45·50 per cent. of those enumerated by their seniors of thirteen. Games

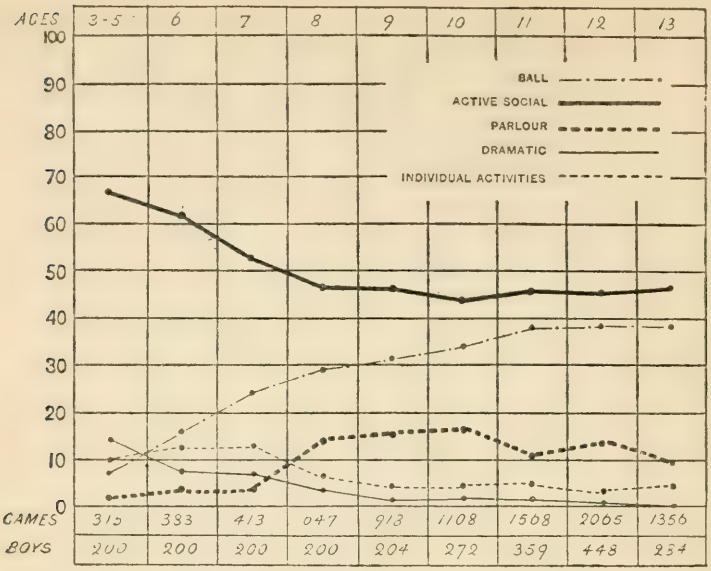
which call for individual skill, on the contrary, only assume much prominence in the lists prepared by girls of eight, but never exceed 25·50 per cent. of the total number mentioned. The interest in dramatic play, so strong in little children, dwindles slowly from 17·25 per cent. to 3 per cent. during the ten years under review; while, on the contrary, love of parlour games and quieter occupations rises from 1·25 per cent. among the school babies, to 14·75 per cent. among girls aged ten, eleven, or twelve. The remarkable devotion to hockey in the modern girl seems responsible for the steadily rising curve of interest in ball games, which at thirteen approaches tenfold what it



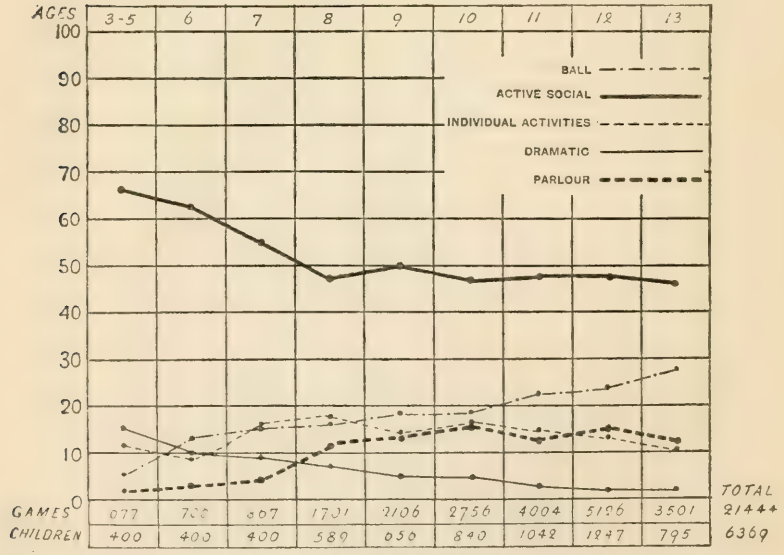
I. (A).—Classification of Favourite Games—Girls.
(*Percentages refer to grand total of games mentioned.*)

was a decade before. Note the remarkable increase of this preference at eleven!

Now compare with these the preferences of boys. When Diagram I. (B) is compared with I. (A) the most marked divergence is seen in the prominent and progressive devotion to ball games, which, always relatively more noticeable in boys, increases from 8·25 per cent. in small boys up to 38·75 per cent. in lads of thirteen. The imitative craving to emulate the feats of elder brothers in cricket and football field (as revealed by the reason given for preferences expressed) is clearly responsible for the rapid rises in the curve of interest from



I. (B).—Classification of Favourite Games—Boys.
(*Percentages refer to grand total of games mentioned.*)



I. (C).—Classification of Favourite Games—Girls and Boys.

16·25 per cent. at six years old, and 24 per cent. at seven, to 29·75 per cent. in would-be little men of eight. Parlour games apparently appeal earlier to boys than to girls, whose doll-play absorbs a major share of their interests, though, as the Inquiry was largely prosecuted in the winter, allowance must be made for seasonal influences.

The acquirement of individual skill through the practice of more or less solitary pastimes is decidedly less attractive to boys than to their sisters; neither do "make believe" games bulk so prominently on their horizon. Indeed, this series of charts appear to me to bring out the following facts:—

(1) The overwhelming fascination exercised by active social games throughout elementary school life; whether they be the simple rhythmic singing games of the infants or the more elaborately organized ball games of the seniors.

(2) With very little people "make believe" games rank next in favour; but, as interest in ball games strengthens, the dramatic impulse declines.

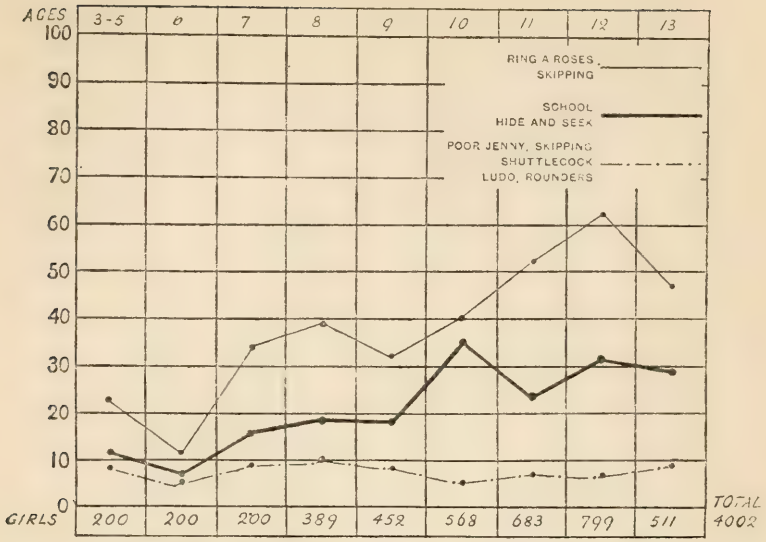
(3) The absence of keen desire to attain individual skill (or is it permissible to infer want of interest in less gregarious forms of amusement?) is suggested by the flat curve which depicts the position of this group of games in each chart. The taste is, as I should expect, most marked between the ages of seven and ten, when the competitive spirit is normally stronger than the co-operative. Parlour games which appeal to the same form of interest (*i.e.* personal proficiency stimulated by competition) are also most enjoyed during this period by boys and girls alike.

The second series of charts is concerned with the *preferences expressed* for *individual* games by girls (A) and boys (B). The curves depict percentages based on figures collected by the following method. The names of the first three games mentioned as favourites in each of the six thousand lists were tabulated and counted; the number of times they were mentioned in each of these positions being also noted. The preference for certain games became quickly obvious, for the same games were so constantly accorded a rank in these places of honour, that little difficulty presented itself in arriving at the degree of favouritism they obtain. Take Chart II. (A) for instance. From three to five years old "Ring a ring of roses" is mentioned as first favourite by 21·5 per cent. of the little girls; while skipping occurs first on the list of from 32 per cent. to 63 per cent. of their elders. "Hide-and-Seek" ranks next in favour with all the girls from seven to thirteen; "playing at school" vies with skipping for a corresponding position among the six-year-olds. There is less unanimity in the choice of third favourite,

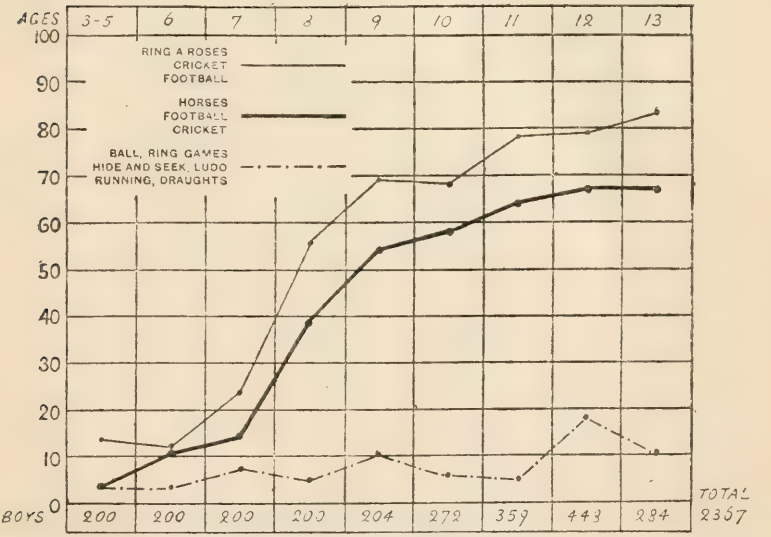
"Poor Jenny" appeals to 10 per cent. of the juniors; "Shuttlecock" occupies this rank with a somewhat smaller percentage of girls, aged eight, ten, and eleven. To "Ludo" this position is assigned by 8 per cent. of girls at nine, while "Rounders" is mentioned in the same proportion at twelve and thirteen. In Chart II. (B) it appears that infant boys also give the first place to "Ring a ring of roses"; the second to "playing horses"; the third to ball games of various kinds. From six years old and onwards, "Cricket" and "Football" are assigned an unmistakable pre-eminence by boys; greater even than appears at first sight; for the second curve (Chart (B), Series II.) which follows so closely the outline of the first, represents the expression of a similar devotion to these two popular games. The upper curve shows the percentage of boys who placed "Football" first and "Cricket" second on their lists; the next below illustrates the tastes of those with whom "Cricket" was first and "Football" second favourite. The third favourite with boys, as with girls, varied considerably. At seven and eight it is "Hide-and-Seek"; at nine and ten, "Ludo"; at eleven it is "running"; at twelve and thirteen, "Draughts."

Now, for what reasons are these games selected, or why do children delight in playing the many more they enumerate with sufficient pleasure to enter them on their list? In order to endeavour to answer these natural queries, I asked the children to give me reasons for their choice.

A quite small minority of children felt unable to offer any reason at all for their selection of certain games as their favourites. A study, however, of those (9899) furnished by their companions, suggested the possibility of a first general classification under two groups: (1) the subjective gratification derived from such games, and (2) the objective advantages anticipated. The process of classification was not easy—overlapping of motive being frequent—consequently my results are not entirely reliable; they are interesting, however, and I hope useful as a preliminary to more careful and detailed work. Under the Group of Reasons classified as connected with Subjective Gratification, I included all those which speak of the physical or mental pleasure derived from the game, such as "I like to toss" or "bat the ball"; "to skip," "pull," "catch," "romp," "race," "run," "bounce," "dance," "clap," "sing," "jump," "laugh," "pretend," "swing," or "fall down"; or such reasons as "I like a game because it keeps us warm," or "moving," or "has a nice tune," "is exciting," and other reasons expressing pleasure in the fun of play, in successful competition, in the interest of a game, or gratification in the quieter amusements of parlour pastimes. Under Objective Gratification I have classed the reasons which refer to the benefit rather than to the pleasure derived from games. These refer chiefly to anticipated



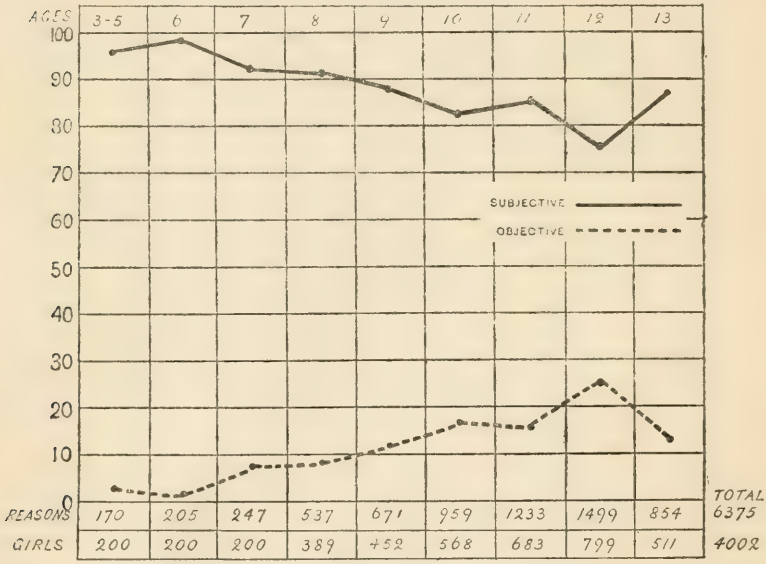
II. (A).—Children's Favourite Games—Order of Preference—Girls.
(Percentages refer to preference expressed by total number of girls.)



II. (B).—Children's Favourite Games—Order of Preference—Boys.
(Percentages refer to preferences expressed by total number of boys.)

advantages, "it makes me think," "be careful," "be sharp," "learns you to make a living," "to be steady," "or strong"; "will make me graceful," or "healthy."

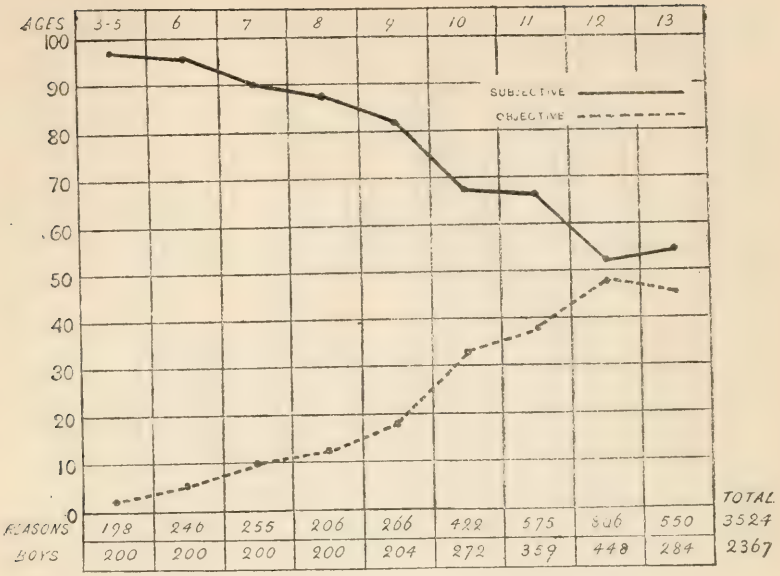
The enormous preponderance of "Subjective" reasons is immediately obvious from a glance at Series III. of my Charts (A), (B), (C). Their average is very high throughout in the case of girls; but the curves in Chart III. (B) emphasize a marked difference between the motives of boys and girls as they grow older. The earlier age at which boys become regular wage-earners may be conceivably responsible for the very interesting curves in this chart; though I frankly confess a far



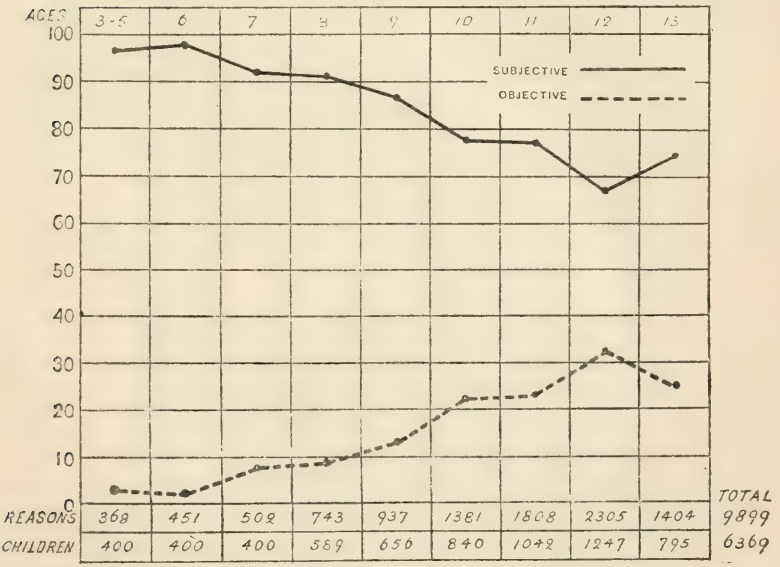
III. (A).—Reasons for Playing Games—Girls.
(*Percentages refer to grand total of reasons mentioned.*)

more detailed analysis of the 3500 and upward reasons advanced by the boys is necessary to gain an insight into underlying motives; neither have I any suggestion to offer in solution of the sharp rise in Subjective reasons and decline in Objective motives noticeable in each chart at thirteen years of age.

This much is, however, of interest. In a recent report made by Professor Grant Chambers (University of Pittsburg) based upon the results of a similar investigation which he conducted in the U.S.A., he remarks that only 3 per cent. of the groups of reasons given could be possibly construed as having a future or utilitarian aim, *e.g.* the



III. (B).—Reasons for Playing Games—Boys.
(*Percentages refer to grand total of reasons mentioned.*)



III. (C).—Reasons for Playing Games—Girls and Boys.
(*Percentages refer to grand total of reasons mentioned.*)

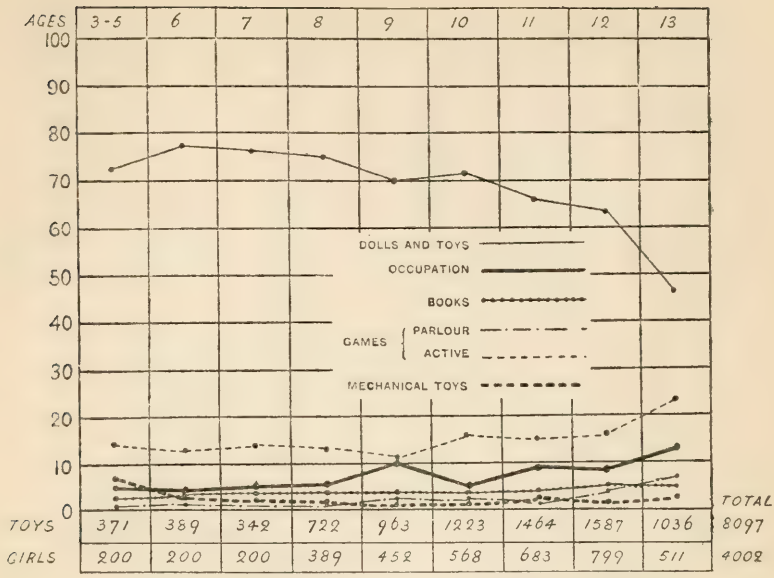
value to health, or the development of skill or thought; in fact, he felt justified in drawing the conclusion that "there is no conscious relation in a child's mind between present play and future utilitarian activity." This conclusion could not be justified, upon my evidence, in the case of English children; but, as I said before, to what degree it is artificial and the outcome of environment or of the sub-conscious desire to make a good impression, no one can say.

To pass now to the subject of favourite toys. The replies to the two questions referring to this point have been submitted to a similar preliminary analysis, and the results appear on the Charts, Series IV. and V.

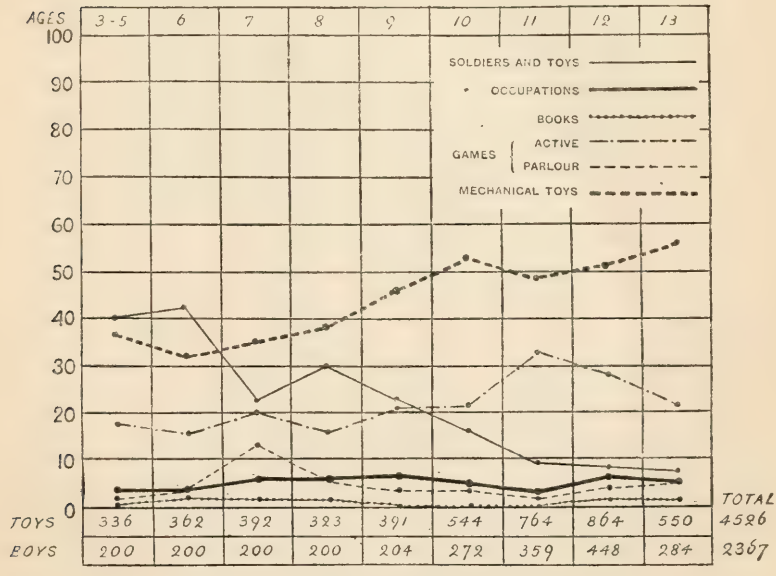
To read their lessons aright, or to attempt conclusions of permanent value, call, literally, for months of study, where time has permitted weeks only. They must therefore be considered with many reservations.

The number of toys mentioned by each child, and their wide variety, rendered the task of their classification one of extreme difficulty. Finally, I adopted the groups represented by the curves in the charts designated. *Dolls and other common toys* correspond in the case of girls in Chart IV. (A) to the curve illustrating *Soldiers and other common toys* in Chart IV. (B) for boys. Under *Occupations* are grouped painting, fretwork, printing, piano-playing, or needlework, etc. *Active games* include such toys as hoops, balls, tops, or marbles, for instance; while under *Parlour games* I have classified diabolo, ping pong, dominoes, chess, etc. In both groups the desire to possess the necessary apparatus led the children to catalogue as toys what at first sight seem to be rather games than toys. *Mechanical toys* cover clockwork engines, trams, cranes, etc. *Books* are included by a few children, but the majority probably do not class them *as* toys, which may account for the moderate interest expressed. The preponderance of town children possibly accounts also for the very few references to pets; too infinitesimal to be depicted by a graph.

The dominant and enduring interest in dolls throughout a girl's school life removes any fear of the loss of their love of dolls by the future mothers of England! Delight in toy soldiers and horses among boys, however, soon yields its place to great devotion to mechanical toys. Engines, motors, and steamers constitute the treasured possessions of 50 per cent. of our boys at ten years old and upwards. At the age of eleven this devotion is temporarily superseded by an increase of interest in balls and marbles, but revives and reaches its zenith with lads of thirteen, 56 per cent. of whom head their lists with such models. The pleasure in individual occupations, such as painting or sewing, calls for attention. This reaches its highest point in girls of thirteen (12 per



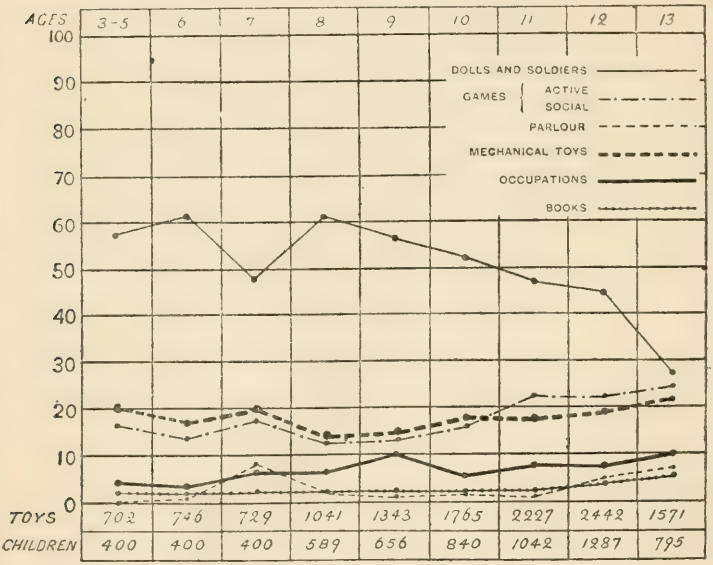
IV. (A).—Classification of Toys Mentioned—Girls.
(*Percentages refer to grand total of toys mentioned.*)



IV. (B).—Classification of Toys Mentioned—Boys.
(*Percentages refer to grand total of toys mentioned.*)

cent.), but attracts 10·5 per cent. of girls aged nine. 7·5 per cent. of boys experience it at the same age, and 7·25 refer to such employments at twelve. So evident an interest demands recognition, though it is subservient to those represented by the curves for dolls, soldiers, and other toys—particularly mechanical ones. The relative position in the favour of our children of these six groups of "toys" is well illustrated by Chart (C) in this Series (IV.).

In Series V. of my charts may be observed the results of an analysis into groups of the first three toys mentioned in each list submitted in my 6000 forms. The charts have been prepared by methods

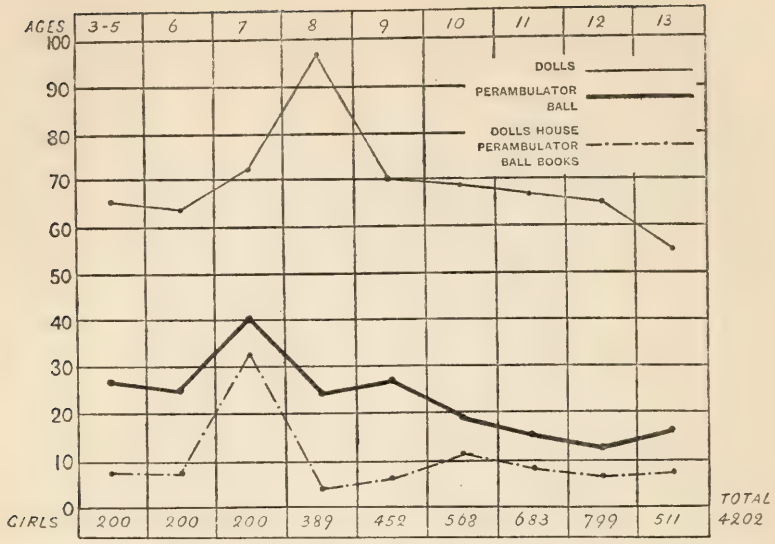


IV. (C).—Favourite Toys—Classification of Toys Mentioned—Girls and Boys.

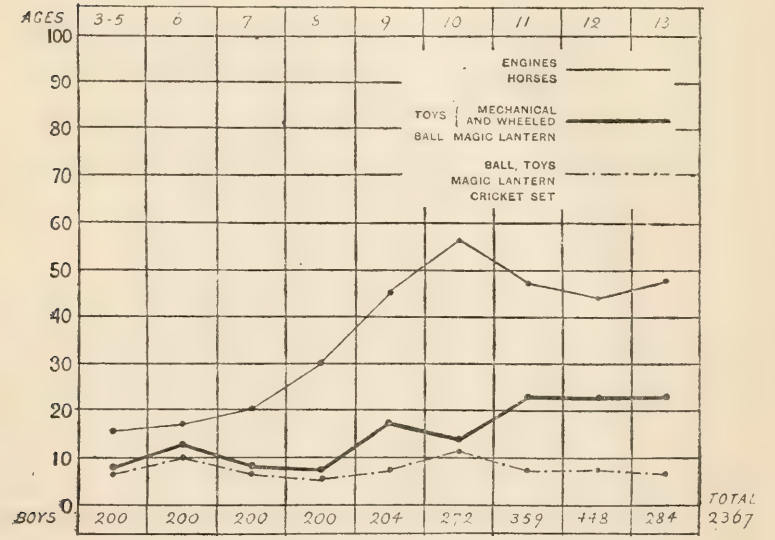
(*Percentages refer to grand total of toys mentioned.*)

similar to those described in the case of the three most highly favoured games.

The absolute devotion to their dolls of little girls appears in Chart V. (A) with extraordinary force: 97·75 of eight-year-old girls accord a doll the place of honour. From the ages of three to six, and again at eleven, a perambulator for these dolls is the next most treasured possession to be mentioned; but it takes the third place in the list of girls aged seven and twelve. A house for their doll ranks third with those who place the perambulator second on their lists. Consequently dolls and their equipment appear to absorb the chief toy interest of all girls up to



V. (A).—Children's Favourite Toys—Order of Preference—Girls.
(*Percentage preference expressed by total number of girls.*)



V. (B).—Children's Favourite Toys—Order of Preference—Boys.
(*Percentage preference expressed by total number of boys.*)

thirteen; balls are assigned the second place by girls of twelve and thirteen, and the third place by those aged six, eight, and eleven. Books occupy this position with their seniors of thirteen.

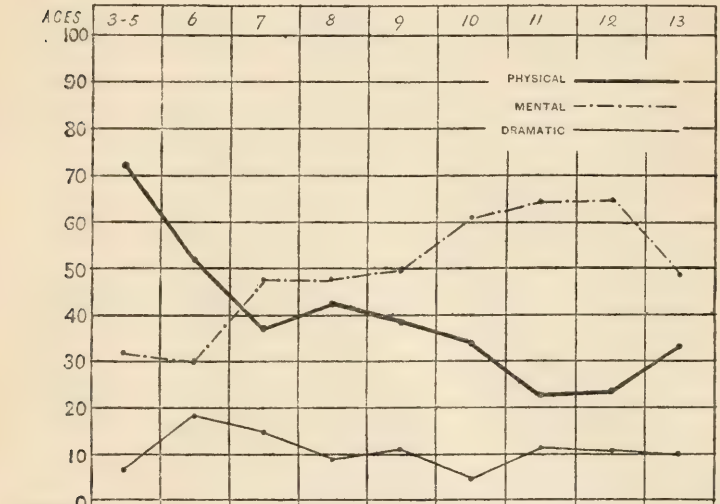
The favours of boys are distributed far more impartially, though, with the exception of little lads of six, who prefer horses, the place of honour is accorded to engines and trains — not necessarily all mechanical. Differentiation on this point presented much difficulty. Boys from three to eight gave the second place to wheeled toys, in some cases mechanical; from nine to twelve a ball occupied this position; at thirteen the ball gave place to a magic lantern. For the third favourite the majority of boys mentioned a wide range of toys other than the ball—this being selected by the infants from three to five, and again at seven. At eleven the magic lantern was assigned the third place, and a cricket-set at twelve. Wheeled and mechanical toys most evidently appeal strongly to the boys of this country, though, so far as I have yet observed, there is little evidence of the exercise of ingenuity in their home construction, but much in favour of a real desire to understand their mechanism, and to turn this knowledge to account in later life.

The last series of charts represent the results of a preliminary classification of the 6913 *Reasons* why these 6000 children love to play with toys, the percentages being based upon an analysis of the grand total of reasons given into three groups, instead of two, as in the case of the reasons offered for playing games, because so much prominence is assigned to the pleasure derived from toys as agents in "make-believe" play.

All the reasons express enjoyment in some form or another. After some consideration, it seemed to me legitimate to subdivide this general emotion into three classes, of which the first should include all reasons expressing pleasurable *physical activity*, such as, I like "to draw" the toy along, "to wheel" it, "spin" it, "bowl" it, "rock" it, "pull," "drive," "roll," "dig," or "carry" it, "dress and undress" it, "wind" it, "wash" it, "load," or "blow," or "strike" it, "build" or "knock it down." In the second, I included all suggestions of *mental or emotional gratification*. I like to "look at" it, to "take it to bed," for instance, or "it makes me happy," "amuses me," is "nicely dressed," "keeps me company," "is funny," "passes the time," is "useful," "interesting," "teaches me to print," "to balance," "to think," or "by its use I can win a lot," or it "keeps me out of mischief," "teaches me to play fair," "is useful in after life."

The constant emphasis laid upon the delight in "make-believe" play with toys necessitated the third group of reasons, somewhat

grandiloquently described as *Dramatic.* Some of these reasons, which occur quite frequently, especially at six years old, are as follows: I like it "to play house," "school" or "shop with," to "act like fathers and mothers," to "make it obey me," to "wash and iron like mother." This "make-believe" impulse influences girls as a whole more strongly than boys, except at eight years old (when the robber, pirate, Red Indian spirit exercises a powerful influence on the games of boys). The decline of dramatic interest, noticeable after that age, does not revive



AGES	3-5	6	7	8	9	10	11	12	13	TOTAL
REASONS	179	249	192	420	515	669	804	1037	542	4607
GIRLS	200	200	200	389	452	568	683	799	511	4002

VI. (A).—Reasons for Playing with Toys—Girls.
(*Percentages refer to grand total of reasons given.*)

in them as seems the case a little later on with girls; with whom the strength of the doll interest is probably a factor in its endurance.

These Charts (VI. (A), (B), (C)) possess a special interest by the marked way in which they demonstrate how the love of sheer physical activity gradually yields in all the children between the ages of seven and eight to more distinctly emotional enjoyment. The general similarity of the curves is most obvious; but why the sharp deviations at thirteen in the case of girls, which so conspicuously influences the curves in Chart VI. (C)?

Now, to what degree do these analyses of the children's answers to my questions confirm the views of psychologists and of U.S.A.

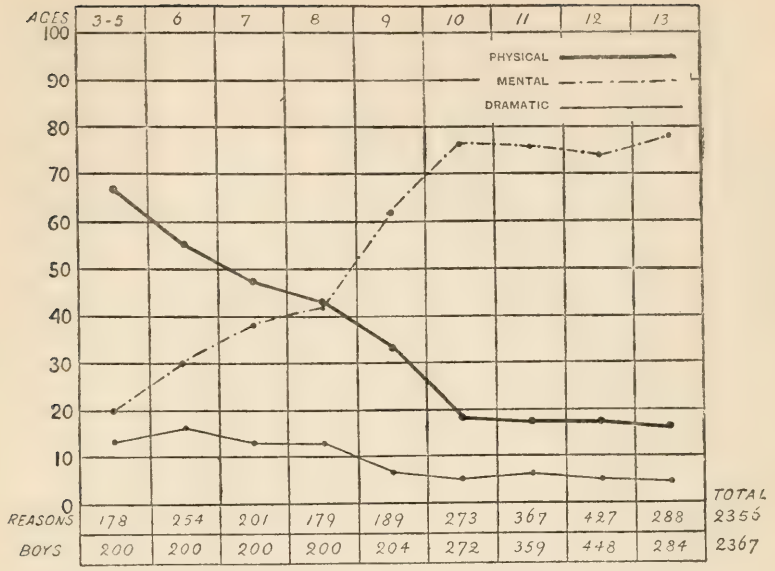
investigators, which I summarized very briefly as a preliminary to their consideration?

There can be no doubt that play *is* almost synonymous with action in the minds of young English children. Before I bring a further instalment of analyses of these returns before you, I shall count and classify the number of active verbs used spontaneously by the children, when giving their reasons for enjoying certain games, or choosing certain toys. Their vocabulary is surprising. Among the 400 three to five children, for instance, the girls employ at least thirty-two different verbs and the boys thirty-eight, expressing personal activity or movement. The number does not, however, increase progressively as years pass on. An interesting change is noticeable among boys and girls of eleven years old and upward. In them the instinct of individual activity gradually but evidently yields place to such reasons for favourite games as: "a great number can play," or "as many as wish can join in these games," "they [the games] give exercise," "amuse," "give recreation," "keep us out of trouble," "pass the time," or the chosen toys "train the eye," "show how steam is produced," "keep children from worrying their parents," "need care and time," etc.

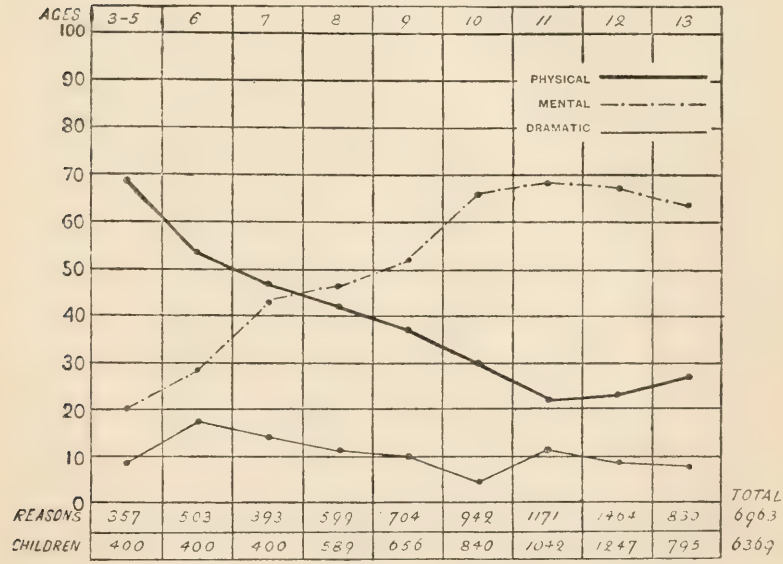
Thus, with the young adolescent thought for others, pleasure in their society, a sense of personal profit to be derived from this or that occupation or discipline of subordination supersede mere momentary gratification through physical exercise. These reasons call for much more detailed study and classification than they have yet received; but I refer to them because they illustrate conspicuously the growth of that co-operative and social spirit natural to this age. So far as I can at present form an opinion, they spring into much greater prominence at eleven than at ten years of age, when sheer enjoyment of personal, as distinguished from corporate, activity is still very prominent in the reasons advanced by the children.

I have already pointed out that rhythmic ring games are first favourite with small children: "I like the tune," or "it is such a nice tune," serving as frequent reasons for their choice. The attractions of skipping with girls correspond apparently to those of football with boys all the rest of school life—personal skill in the one sex and the excitement of co-operative action leading to success in the other, appear to be general motives to their emphasis.

All the children dwell repeatedly on their exciting qualities as being a substantial reason for mentioning almost all their pursuits. Query: is this thirst for the perpetual stimulus of excitement a wholesome appetite to foster? When I am in a position to tell you the percentage of boys whose voluntarily voiced ideal it is to be a professional cricketer or



VI. (B).—Reasons for Playing with Toys—Boys.



VI. (C).—Reasons for Playing with Toys—Girls and Boys.
(*Percentages refer to grand total of reasons given.*)

football player, you will probably sympathize with my wish that our boys were systematically interested in a wider range of ball games, or that these two national games had not assumed a too prevalent professional status and absorbing interest in this country.

To turn to a less anxious aspect of my subject. Attention has been already drawn to the sphere of play as an opportunity for the self-originated rehearsal of racial activities, at one time vital in their importance to human beings, but now useful rather as the foundation they afford for the intellectual developments appropriate to the twentieth century. The favourite games listed by boys from eight to ten years of age inclusive, afford abundant evidence of their strong taste for just the type of play our knowledge of primitive man would lead us to expect. They yearn to play robbers, thieves, pirates, police, scouts, and bogies, they delight to play soldiers, to fight, to storm forts, to drive horses or engines, to knock each other about, to make things with tools; in one case, even, a hardened sinner of nine confesses to the additional attraction afforded by frightening his little sister in the course of such play!

Meanwhile, the girls are absorbed in doll play, individual or social; one child of eight enjoys playing at "mothers—because they love you"; while teachers may get a hint from a companion whose favourite game is "school—because you can clean the board."

My internal evidence shows that in the earlier years of life the power over a toy—to make it move, squeak, run, roll, and generally conform to the whim of its possessor—constitutes its strongest attraction. What I—the small owner—can cause my toy to do is an all-sufficient reason for its choice. The sense of ownership, of possession, of desire to exercise individual power is very strong—if not pre-eminent—until towards ten years of age; its judicious encouragement, therefore, seems a clear duty; for unless training in the use of power and in the responsibility of ownership be enforced, license and abuse follow later on. The faith in organized games is so widespread and strong to-day, that my plea to permit—nay, to furnish—ample opportunity for self-initiated, free play with toys for young children will possibly be unpopular. But I nevertheless make it very strongly. Children derive great developmental benefit through such a form of play, especially until nine or ten years of age. They exercise their OWN imagination, develop their OWN capacity for observation and resourcefulness; learn by their OWN failures, taste the incentive of PERSONAL success. Ring and other organized games undoubtedly have their place; but this interest is, in my opinion, not a prominent one at this age period, unless the co-operative spirit be abnormally stimulated. Let the toys be as

simple, as self-inventive, as those of which Miss Clara Grant has told us, *but* permit toys to be made, allow their ownership to be individual, and foster their spontaneous use—all, of course, in reason.

After about ten or eleven years of age the children's choice of toys, as well as the form in which they are employed, show the phase of development associated with adolescence—the wish to share a pleasure with others assumes importance, as well as the desire to profit by trials of skill or patience, or to understand intelligently mechanisms and processes. These charts, and the figures and reasons upon which they are based, seem to me to teem with suggestions for bridging over that difficult gulf between childhood and youth, so far as opportunities for education by means of games and hobbies are concerned. Certainly we want to take hold of the taste for elementary mechanics so evidently strong in boys of twelve and thirteen years of age, and turn it to better account than seems usual at present.

The isolation of our children's play from parental interests is illustrated quite unconsciously in my returns—ONE boy of ten years mentions that his father is teaching him chess; ONE girl of the same age writes that ONCE her mother took part in a doll's tea party. Equally and pathetically unconscious are the revelations made of the existence of unsatisfactory influences and of the incidental temptations which are given among the reasons for choice of certain forms of play by boys and girls of ten years and upwards. Thus: they "keep me in evenings," "save me from getting into trouble at night," "keep me home," and so forth; one girl of twelve years volunteers indeed that "games take one's mind off unpleasant thoughts and duties!"

Happily there is also a pleasant side to the spontaneity of these revelations, though further quotations must be reserved for a future occasion. They lead me to think that a very large majority of the information collected for me is a true expression of the children's own views; and, in many cases at least, they confirm fully my own gradually formed opinions. Among the thanks I owe to all who have assisted me in this Inquiry, the extent of which I have most imperfectly brought before you, you will admit that a meed is due to the two boys—aged respectively eleven and twelve years—whose naïve words supply me with a most fitting conclusion to this paper. "Games," writes the junior of the two, "are good for children; they make their lives happy and pleasant." "A toy," declares the senior, is also "good for children, for it makes the mind glad." Out of the mouths of these children, I could bring a wealth of evidence to show that those universal play impulses, by which the physiological development of the neuro-muscular systems is promoted and the highest moral faculties are stimulated into

healthful character-forming function, are subjectively associated by them with free, pleasure-giving, vigorous, often dramatic movement, with opportunities for intelligent self-development, and with a general satisfaction of the social instinct. There exists, therefore, in rightly regulated play an educational agent of the first importance; BUT to secure its full advantages much of this play must, for the first ten years of life, be free—not entirely nor preponderatingly "organized"; opportunity for individual play with toys must be permitted, nay, encouraged. The age and sex of each child must be respected when play-time comes, if the full worth of that play is to be derived. The "work" performed by children, when engaged in absorbing, intelligent, self-initiated play, must also be recognized. Interests and "hobbies" must be turned more profitably to account, especially in adolescence. Finally here, as in all matters educational or sociological, the relative position of individual and community must be delicately adjusted and judiciously organized in the best interests of all concerned.

THE SENSE OF DUTY.

By T. G. TIBBEY, B.A.

In *Archives de Psychologie* for May, 1910 (vol. ix. No. 36), M. Pièrre Bovet, Professor at the University of Neuchatel, considers the question of the "feeling of oughtness," as Professor Leuba has expressed it. The article is long, and only the briefest outline can be attempted here. But it is a finely analytic piece of work—at times one wonders whether the analysis is not over fine—in which, by a method of "provoked introspection," the author seeks to find the influence of the sense of right and wrong upon the answers to certain questions, and analyzes the results.

In the course of studying the problem of the psychology of thought, upon which so much work has been done in Germany, the experiments of Messer and of Bühler were repeated in the Psychological Laboratory of the University of Geneva. In these experiments, the experimenter A gives certain instructions to the subject B; he will, for example, ask him to reply to a word, said or shown, by another word of a definite kind, *e.g.* by an adjective, a verb, a more general or a more specific word. Or he will ask him a question, as though examining him, or state a somewhat paradoxical aphorism and ask if he understands it. The reply having been given, and the reaction time noted to the fifth of a second, the subject B is asked to tell as exactly as possible all that took place between the question and the answer, and the reply being written out constitutes part of the record of the experiments.

The five hundred records so obtained held within them a harvest of varied facts of mental life, and notable was the number of sentiments expressed. For instance, the word "horse" being given and the first adjective asked for, "white" was the reply. The subject then said he had immediately on hearing the signal seen a greyish horse, and wondered whether the word "white" called up the image or the image called up the word. He did not want to say "white," he wished to say "a thin horse," but *felt that he ought* to say the first word.

In many replies of this type the author considered there were facts of conscience sufficiently well characterized to make it possible to study them apart, and though he himself questions whether his distinctions may not at times be considered too minute, he believes the result may

be worth while so long as it is desirable to speak of moral obligation in precise terms.

The nature of the command given, and its reaction, both upon the experimenter and the subject, are first considered. On the part of the latter, to be willing to obey the instruction is a simpler state of consciousness than unwillingness; in the former case the command is accepted as an idea and is allowed to carry itself out, in the latter a definite act of inhibition is set up, having causes and motives of its own. The command, being given, becomes forthwith a part of the consciousness of the subject, and as such often awakens certain images, such as auditive memories or verbal representations. It is important to note that these may be present without any direct consciousness of the command, and similar images may arise, as Ach, a German writer, has shown, in considerable complexity and variety in the moment before the reception of the command. On the other hand, it frequently happened that the subject was conscious of the command in the absence of any concomitant images—he knew that he had something to do, that was all.

In the former case, that the subject responds to the command is shown by his actions, and yet he may declare that he had not thought of what was asked of him either before, or after, the appearance of the signal. In some cases this is due to inattention or forgetfulness; yet, since we know that our conduct is frequently directed by knowledge and perceptions which are outside the field of consciousness, this condition is not in itself extraordinary. Studies made on the psychology of judgment have made clear that our thought is a succession of acts in all respects comparable to those by which our organism adapts itself to its surroundings, and a command is able to act in a quite regular manner without having been present to the mind under a form which showed its action.

The instruction given is often altered by the subject, either by extension or contraction of its meaning. Instead of giving the *first* adjective which comes to mind in reply to a noun, the subject may reject the first in favour of a later one. In one case, in response to *milk*, *black* was the first adjective that arose, but white was actually said as more suitable. Sometimes, again, the subject sees the different meanings of a word, and for varying reasons chooses one. Such changes may be involuntary and the fact only appear on consideration; they tend to make the command more complex, or more simple, not in the sense of being more easy, but in the logical sense of the term. The example quoted of *white milk* is a case in point; the command was changed from "give the first adjective" to "give the first adjective that

would make good sense." Some, again, felt obliged to turn the abstract task presented to them into concrete images, whilst sometimes the order given called up by association another which was responded to in preference to the first.

Such complicating tendencies may be due to several causes—an often unconscious æsthetic ideal, a desire for harmony in expression, a fear of being commonplace or of using an ungrammatical expression, or inability to respond to the command and a desire to do something. Whatever may be their cause, it was over these that "feelings of oughtness" arose, some of the subjects showing by their answers the existence of some questioning within themselves as to the answer that ought to have been given. As to how far this questioning belonged to the introspective review that was provoked, rather than to the actual search made for an answer, may be open to question.

Here follows a very detailed description of the different forms a sense of duty may take, and an analysis of its affective coefficients. The various states of feeling through which the subject passed, from the anxiety immediately before the question as given up to the feeling of satisfaction when an answer was made, or of annoyance where it was felt to have been unfitting, are all most minutely examined. Some answers show that a rich imagery arose as soon as the question was perceived, especially where some preference was asked for. Where a choice was allowed, its affective side was often disagreeable, a fear that the right choice would not be made being predominant, whilst sometimes there was a vague feeling that the choice was forced—that the thing chosen was not really liked. Again, the feeling of search for an answer was frequently akin to despair lest no answer should be found; but when later the subject found himself in a position to give the reply, a feeling of satisfaction supervened, unless, as before stated, the answer was not felt to be satisfactory. The fear of being commonplace reigned supreme here.

Most of these affective states were not specifically connected with the sense of duty; some of them belong to any species of voluntary effort. Two, however, appeared more directly allied to it—the feeling of struggle whilst searching, and the feeling of remorse when an unsatisfactory answer was given, though both of these may incidentally be affected by other motives than that of seeking the most honest answer to the question.

As James and others have shown, it is usually impossible to discover among the psychological elements of the voluntary act a positive and conscious resolution—the idea leads to the act if nothing prevents. Some of these subjects, however, were able to give instances in which

an intention had been inhibited, with the probable cause of the inhibition, such as recalling the command, a desire for truth, a desire to avoid repetition, or a fear of ridicule, etc. Of the four cases considered, the proportion of answers showing inhibition varied from 4 per cent. to 25 per cent., the last being one who throughout had shown himself very scrupulous in his answers.

At each moment again, the "sense of duty" and the "sense of power" mix, and to a great extent a duty is pleasant in proportion to its ease; but there are times when one feels the co-existence of impressions of facility and a feeling of incapacity, or impressions of difficulty together with a consciousness of power. M. Bovet concludes that this whole subject needs to be considered in the light of further investigation.

Feelings of necessity were found to have occasionally intervened in the answers. Some words seemed to impose themselves, to come unsought, whilst the subject remained passive; in other cases a word had to be sought to express some feeling which preceded it. The first type could sometimes be analyzed by the subject, and found to be due to the influence of a preceding question or to some suggestion from the surroundings. M. Bovet here considers that if the feeling of necessity and the sense of duty are alike in that in neither case does the subject initiate the tendency that he feels, they differ in that the sense of duty attaches this tendency to an accepted command, whilst its origin remains obscure in the case of a feeling of necessity. But it may not always be easy to establish this difference outside the laboratory, when the tendencies of actual life are in question.

Though all the subjects experimented upon were of necessity educated adults, as it happened few in number and in the main trained psychologists, the ideas started, as much as any actual conclusions reached in the course of the investigation, contain numerous suggestions applicable to the many cases which may be grouped under the heads of answering questions and carrying out instructions in the life beyond the laboratory, and not in the least in the life of the school. Even in the undeveloped mind of the child, not a few of the hesitancies, searchings, anxieties, errors, and struggles revealed in these answers occur, and not always do we make allowances for them or seek how best either to solve the difficulties or to turn them to good account.

SUGGESTIONS FOR PARENTS AND TEACHERS.

Education and Subconsciousness.—"Everything that surrounds youth, everysensation from his own body, every instinct that comes from the functional activity of his organs, is adding an enormous number of impressions to his memory, which go to constitute his subconscious self. . . . The totality of our memory are made up to a far greater degree of subconscious than of conscious impressions. The accumulated contents of our memory govern our emotions, our thoughts and actions, and therefore that portion of our memory made up of subconscious impressions and their aggregate must necessarily play a great part in our individual life. . . . The subconscious self acts with impulse irrespective of effect, striving to satisfy directly our innermost, true elemental nature. How important is it, therefore, that the surroundings of the child which form the temperament should be chosen with care! It is not precept or admonition that is most important in this period; careful constant example, without apparent effort or purpose, is the beginning of true culture. For culture depends upon *impulse*, not upon purpose. . . . The objects surrounding the child, the persons habitually in its company, even the colours, should be chosen with care; sunlight and fresh air should have free access, not only for the sake of the body's health, but also to create and preserve a mood of natural joyfulness."—*Dr. Louis Waldstein*, in his book on "The Subconscious Self."

The Muscles in Early Education.—"For all early education it is very important to notice the part played by muscular responses in perceptual process. They are at first the only expression that meaning can have, and are an indispensable condition of reaching the next step in the performance of a perceptual train. It is not too much to say that every mind goes through a stage when thinking can only be done through muscles. By means of his muscles the child first attains to any knowledge of things, and it is by his movements that his first meanings are expressed. The period during which a child remains in this stage varies greatly in length; but whether it is long or short, it cannot be artificially curtailed without permanent injury to the growing mind. Complete freedom for play, or movement within bounds set by consideration of health only, is the best environment during this period. . . . The directions for this muscular

development are to be sought in the spontaneous movement and impulses of children, as they express themselves in games. Most indoor games, and all outdoor games, are examples of almost pure perceptual process."—*W. E. Urwick*, in his book on "The Child's Mind."

Aphasia Cured by Education.—"Dr. Heller showed recently to the Vienna Medical Society a case of aphasia which he had demonstrated to the society two years before. The child could not then speak or read. By education the boy, now eight years of age, was able to remember the words he wrote down. He can count fairly well in writing but not orally. Fröschel believed that these children should be systematically exercised by the ear, because their other senses would never be very fully developed, and Dr. Heller agreed that the attention of teachers should be drawn to these two types; children of a pronounced visual type were generally badly endowed acoustically."—From *School Hygiene*, for November, 1910.

The Feeble-minded Child and Association.—"We may turn our attention to the psychology of association as an illustration of the importance of a knowledge of educational psychology for the teacher of the subnormal child. The teacher discovers very quickly that the subnormal child does not associate normally. The suggestion of one thing does not call up the thing that to the teacher seems to be most naturally and intimately associated with it, and the question at once arises: Why is this so, and what is to be done? Here we have to refer to the physical condition of the subnormal child. Undoubtedly, the reason for this lack of association lies in the fact that the association fibres are among the parts of the brain that are most seriously affected. Developing late as they do, it is very probable that the arrest has caught them undeveloped, so that the child does not associate simply because he has not the organs for associating."—*Dr. Henry H. Goddard*, on "Problems of the Special Class," in the *Journal of Educational Psychology* (U.S.A.), November, 1910.

Graphs for Defectives and Others.—"Contrary to the old pedagogy which endeavoured to establish an ideal type of pupil and to force every child to conform to this fictitious type as closely as possible, it has been found preferable to estimate the pupil's progress by a comparison with his own previous standing. One cannot too highly praise M. Boitel, Director of the Ecole Turgot, at Paris, who conceived the idea of constructing graphs as a stimulus to individual emulation. Each week the child traces the curve of his progress from data which he has obtained in the course of his daily work. The ascending, horizontal, or descending nature of the curve indicates his

standing. It is to be hoped that these graphs, successfully employed in classes for defectives, will be more generally used with all classes of pupils. They are already being introduced into a number of institutions."—*Mons. G. Vattier*, on "Experimental Pedagogy in France," in the *Journal of Educational Psychology* (U.S.A.), for September, 1910.

Qualification of Teachers (French) of Defectives.—"The teachers must have obtained the 'certificate of fitness for teaching retarded or defective children.' Candidates qualify by a year's residence in a special establishment and a written examination which tests the candidate's knowledge of the physiology, school hygiene, psychology and pedagogy of defectives. The following indicates the field covered by the examination for this certificate: general characteristics of defective children; the conditions which give rise to idiocy, imbecility, and feeble-mindedness; external appearance of defectives; sense organs; instincts; movements and volition; language; intelligence and special aptitudes; brief outline of medical treatment and hygiene; education; internal organisation of schools; courses of study; utilization of defectives; struggle against the causes."—This is also from the article on "Experimental Pedagogy in France."

Kant on Experimental Pedagogy.—"*Experimental schools* must first be established before we can establish *normal schools*. . . . People imagine, indeed, that experiments in education are unnecessary, and that we can judge from our reason whether anything is good or not. This is a great mistake, and experience teaches us that the results of an experiment are often entirely different from what we expected. Thus we see that, since we must be guided by experiments, no one generation can set forth a complete scheme of education."—From "Kant on Education," a translation by *Miss Annette Churton.*

Rate of Questioning.—"The children who reply most quickly, it may be remarked, are not necessarily the children of highest intelligence. In fact, on psychological grounds, rapid questioning stands condemned. The concrete thinking of the child moves surprisingly slowly; in some cases, it has been asserted, the child takes almost ten times as long as the adult to respond to a stimulus equally familiar to both. The usual rate of questioning in schools is probably too rapid, and it would be a useful contribution to experimental education if the *tempo* of questioning for different ages and different classes of children were determined."—*Robert R. Rusk*, M.A., B.A. (Cantab.), Ph. D., on "Experimental Education" in *The Journal of Education*, December, 1910.

NOTES.

Lecture Lists of the Constituent Societies.—BIRMINGHAM: *Presidential address*, Dr. Walter Jordan, January 24; *The Estimation of Mental Capacity in Children*, Dr. R. Langdon-Down, February 21; *Medical Inspection*, Dr. G. E. Oates, March 21.

CHELTENHAM: *Some Aspects of Mind*, Dr. Pruen, in February; *Child-Study in the Classroom*, Miss Louch.

DUNDEE: *The Development of the Social Consciousness of the Child*, John Sime, Esq., M.A., towards end of January; a lecture by Dr. Lewis McIntyre, in February.

EDINBURGH: *A Critical Examination of the Phonic Method of Teaching Reading*, Robert Jackson, Esq., M.A., Friday, January 27; *The Children's Charter*, Mrs. Inglis, Wednesday, February 15; *General Instinctive Tendencies in Child Development*, James Drever, Esq., M.A., B.Sc., Friday, March 10.

HALIFAX: *Fairy Tales for Children*, E. J. Wareham, Esq., January 19; *The Physique of the Nation's Children*, Dr. T. N. Kelynack, February 2.

MANCHESTER: *The Teaching of Reading*, Miss Wroe, Friday, January 20; *Handwork* (*with special reference to Primitive Man*), Miss Findlay, Friday, February 24.

LIVERPOOL: *The Art of Childhood*, Miss A. H. Wright, Friday, January 27; *The Allied Faculties of Children*, J. Kay, Esq., B.A., Friday, February 17; *The Education of the Future*, M. W. Keatinge, Esq., M.A., Friday, March 17; *Children's Gift of Musical Expression*, R. T. Edwards, Esq., Friday, March 31.

LONDON: *Recreational Activities of Girls during Adolescence*, Mrs. M. Scharlieb, M.D., M.S., January 26; (1) *Recreational Activities*: *English Folk Dances*, by Cecil J. Sharp, and (2) *Training of Gymnastic Teachers*, Lieut. Braae-Hansen, February 9; *Should Games be organized?* a discussion introduced by Miss Nuth and Dr. Hayward, February 23; *Appreciative Music Study: its application in the Training of the Child*, Stewart Macpherson, Esq., March 9; *Educational Possibilities of the Boy Scout Movement*, W. H. Stuart Garnett, Esq., March 23; *The Measurement of the Intelligence, with special reference to Mentally Defective Children*, Dr. A. R. Abelson, April 6.

Journal Circulation.—No suggestions have been received in answer to the editor's invitation for such in the October number. The Liverpool Society prints, on the front page of its lectures' card, the following notice: "Official organ of the C.S.S.—*Child-Study*. Published quarterly. Price 6*d.* each."

Children and Cinematograph.—Only two teachers (head-mistresses) have sent in any materials for an investigation. Will any one else help in the matter?

Our next Annual Conference.—The Halifax Society have fixed the date of the conference for July 13, 14, and 15.

An Assistant to the General Secretaries.—The appointment of an assistant to the general secretaries, as resolved on at the annual conference, has become urgent. Mr. Mulford is, unfortunately, obliged to resign the secretaryship of the Journal Committee, owing to pressure of other matters. It is thought that an assistant to the general secretaries might also be secretary to the Journal Committee. Can any one suggest a suitable person? If so, will they please write to Miss Louch or Mr. Mulford.

The Dundee Society is conducting "an investigation into the subject of School Games: their origin in time and space, their seasons and localities, characteristics,

influence, etc." Any one interested should write to R. Jackson, Esq., Training College, Dundee, for a copy of the *questionnaire*.

International Congress on Child-Study.—The first International Congress on Child-Study is to be held in Brussels, during the first fortnight in August, 1911. Information may be obtained from Dr. I. Ioteyko, 35, Avenue Paul de Jaer, Brussels.

Farewell to Miss Alice Ravenhill.—After giving the opening lecture of the session, to the largest audience the London Society has had, Miss Ravenhill was presented with a lovely bouquet of roses. Sir James Crichton-Browne made a graceful speech in presenting the flowers, and Dr. Eric Pritchard and Miss Kate Stevens also spoke : expressing on behalf of the London members their high appreciation of the work Miss Ravenhill has done for child-study, great regret at losing her even for a time, and sincerest wishes for her welfare in Canada. In response Miss Ravenhill expressed her thanks for the great kindness of her friends, and spoke of the great help she had received from colleagues.

Child Attendant Association.—The Governors of the National Froebel Union have decided to promote the training of suitable young women for the position of Child Attendants, as advocated in the "Report of the Consultative Committee upon the School Attendance of Children below the Age of Five." Particulars can be obtained from : The Secretary, Child Attendant Association, Norwich House, Bloomsbury, London, W.C.

REVIEWS.

Day and Evening Schools, their Management and Organization. By F. H. Hayward, D.Lit., M.A., B.Sc. Ralph Holland & Co. 5*s*. net. 610 pp. and Index.

At the close of a necessarily hurried reading of this book one is faced by the question, "Are there any aspects of elementary school work upon which it does not have some bearing?" Although in the main devoted to the elder pupils, and more especially to boys—what else can be expected from a mere man?—yet both infants and girls make specific, if fleeting, appearances, and much of what is written is quite general in application. Six of the chapters deal with evening schools ; eight others are devoted to a refutation of the "dogma of formal training" against which Dr. Hayward has so long waged war ; the remainder, some three dozen, range over questions of adolescence, of instincts, curriculum, teaching methods, examinations, discipline, and the relations of the school to the home and the nation. Whether dealing with methods of questioning, or insisting upon the importance of facts, and of knowledge with enthusiasm rather than method, or suggesting time-saving schemes, as the drill rota, or new methods of classification, as the house system, or emphasizing the importance of training in manners, of the relations of the school staff, or of wide reading on the teacher's part, or discussing the right use of notes, or new disciplinary methods, there is throughout a combination of practicability and wide knowledge. Perhaps the most suggestive chapters in the book are those dealing with the School and the World of Literature, the Drama, and the World of Art. Necessarily there is much that is reminiscent of earlier work, and so wide a field cannot be covered without raising points of criticism ; but a multitude of useful suggestions are made, and the results of the latest researches are constantly drawn upon for exemplification. As always, one is impressed by the breadth of Dr. Hayward's reading and the catholicity of his interests, whilst in this book the polemical note is distinctly softened.

T. G. T.

Mentally Deficient Children: their treatment and training. Third edition. By G. E. SHUTTLEWORTH, B.A., M.D., etc., and W. A. POTTS, B.A. M.D., etc. London: H. K. Lewis. 1910. Crown 8vo. Pp. xviii. + 236. 5*s.* net.

The third edition of this well-known work is before us. On this occasion Dr. Shuttleworth has had the co-operation of Dr. Potts, of Birmingham, who has had long practical experience as Chairman of the After-Care Committee and a member of the Special Schools Committee of that city, and was one of the medical investigators appointed by the Royal Commission on the Care and Control of the Feeble-Minded. The scope of the work has been somewhat extended and much matter added dealing with more recent aspects of the question, such as the results of the establishment of special schools under the provisions of the Defective and Epileptic Children Act, 1899. So far as was possible within the limits of the work, the voluminous Report of the Royal Commission has been drawn upon, and the difficult task of selecting from this source has been handled in a judicious manner.

There are new chapters on the special instruction of defective children, on the medical examination of children requiring special instruction, and appendices giving recent information as to public and charitable institutions, bibliography, etc.

Twelve new plates have been added which supply ample and admirable illustration to the text, which has throughout been amplified and carefully revised. The first edition of Dr. Shuttleworth's little book had already established for itself an assured position both in this country and abroad; and within the limits laid down was one of the most useful treatises on the subject whether to the medical man, the educationist, the philanthropist, or the lay reader. The first is now superseded and surpassed by the present edition which will be a necessary companion and guide to any one who is interested in or confronted by the problem of Mental Deficiency in any of its varied aspects.

R. L-D.

Publications Received.—*The Eugenics Review; School Hygiene; Betterment; Educational Times; The Journal of Education; Parent's Review; Bibliography of Social Science; Child Life; From Slavery to Freedom* (the days of Moses. For children. Longmans. 3*s.* 6*d.* net.) *The Problem of the Crippled School-Child*, by E. D. Telford, F.R.C.S. (Sherratt & Hughes. 6*d.*); *Children: A. Märchen*, by Hugo Salus (copies from the translator: Miss A. C. Caton, 22, Mount Carmel Chambers, Kensington, W. 1*s.* 1*d.*); Report of the Massachusett's *School for the Feeble-Minded* at Waltham, 1908; *The Imbecile with Criminal Instincts*, by Dr. Walter E. Fernald; *Genesis of Hysterical States in Childhood and their relation to Fears and Obsessions*, and *Psycho-Propholaxis in Childhood*, by Tom A. Williams, M.B., C.M.

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